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HANDBOOK

ON THE

DIAGNOSIS

OF

SKIN DISEASES

R. LIVEING M.D.

THE

DIAGNOSIS AND TREATMENT

OF

SKIN DISEASES

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A HANDBOOK

ON

DISEASES OF THE SKIN

WITH ESPECIAL REFERENCE TO

DIAGNOSIS AND TREATMENT

BY

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SKIN DISEASES' 'ELEPHANTIASIS GRÆCORUM' ETC.

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PREFACE

TO

THE SECOND EDITION.

In the present edition, acting on the suggestion of several of my critics, I have somewhat extended the scope of my Handbook by adding the subject of Treatment to that of Diagnosis; and, further, I have discussed briefly the causes of a few of the more important affections of the skin, such as Eczema and Psoriasis.

Lastly, I have added a chapter on Therapeutics, which I hope will be found not the least useful in the book.

11 Manchester Square.

PREFACE

TO

THE FIRST EDITION.

In the following pages I have endeavoured to give a sketch of the symptomatology of skin diseases, or of the characteristics by which we recognise or distinguish one skin affection from another. With this object in view, I have in some instances confined my remarks chiefly to the differential diagnosis. For example, in such well-known maladies as Scabies and Eczema, I have not thought it necessary to give a very minute description of the disease, but have rather preferred to draw attention to the peculiarities and distinctive points which enable us to form a sound and rapid diagnosis. In dealing, however, with the rarer skin affections, such as Lupus, Hydroa, Xanthoma, Purpura rheumatica, and Scleroderma, I have given a more detailed description of their symptoms, but have only touched on their etiology when it has had some important bearing on diagnosis. I have given references to the best plates in common use for the convenience of those who wish to consult them.

The introductory chapter has been devoted to a discussion of the best mode of studying skin diseases, with a view to obtaining an accurate knowledge of their nature and affinities. In the second chapter, I have pointed out the *value* of the so-called elementary lesions in their bearing on diagnosis. In almost all cases the sketches of the different skin affections are derived from my own practice and observation, but at the same time I have not failed to avail myself of the writings of others, when they have seemed to me sufficiently concise for the purpose I had in view.

11 MANCHESTER SQUARE.

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DIAGNOSIS
OF
SKIN DISEASES.

CHAPTER I.

INTRODUCTORY.

In the following introductory remarks on the best method of observing diseases of the skin, I would point out, in the first place, that the diagnosis of a disease, to be of any practical value, includes much more than assigning to it a name; it involves a correct estimate both of its nature and of its affinities. The great majority of skin affections are forms of inflammation, and as such are very much alike as regards details, though they may differ altogether in other important respects. Thus, in almost all inflammations of the skin we may chance to find red patches, papules, vesicles, blebs, pustules, scales, or crusts; and, therefore, the first point of importance is the recognition of the fact that these varying phenomena of cutaneous inflammation are simply brought about by the anatomical structure of the skin, and are, therefore, of uncertain value in determining the nature of the inflammation. The extent and degree of the inflammation, the tissue involved, the grouping of the eruption,

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and the part affected, may all be of more importance than the minute characters of the elementary changes. But, although I wish at the outset to guard against an overestimate of the diagnostic value of minute characteristics, I nevertheless attach considerable importance to them, especially in certain cases, as I shall hereafter explain.

'For the recognition of a disease of the skin,' says Hebra, 'no other assistance is required than a knowledge of the objective symptoms, which are visible on the surface of the body in each particular case. We do not attach any value whatever either to the history or to the subjective phenomena in investigating a cutaneous affection, for we ought to be guided in this matter only by those symptoms which are appreciable by the sight, the touch, or sometimes by the smell. These afford certain and infallible grounds for the establishment of a diagnosis, for they have their origin in the malady itself. They are, so to speak, the alphabet of which the letters are traced on the skin; and our task is but that of deciphering the writing.'

This statement of Hebra, that we do not attach any value whatever either to the history or to the subjective phenomena in investigating a cutaneous affection, must be received with reservation. It is, however, valuable, inasmuch as it tends to impress strongly and, as it were, to exaggerate the leading feature in our means of diagnosis. On the other hand, though an expert of Hebra's experience may possibly dispense with the aid of history and subjective sensations, yet few will doubt that in ordinary practice the history of a case may be of great use in enabling us to arrive at a correct diagnosis. For example, scabies in children is sometimes masked by an unusually copious eruption of eczema. If, however, in a doubtful case, we learn that several members of a family are coincidently suffering from a similar affection, there will be presumptive evidence that the disease is scabies. No doubt the answer to this is, that we have the means of proving positively the nature of the malady by demonstrating the presence of the acarus. Yes; but this mode of proof is not always convenient, and in some cases where treatment has been already commenced, not even possible. In such a case, the history may be of great diagnostic value. Again, even the 'subjective phenomena' are useful in determining the nature of a skin affection. We have not unfrequently to deal with mild cases of intermittent urticaria, an affection which is often of such a transitory nature that the wheals and even the irritability of the skin may have vanished at the very time when the patient presents himself for examination, and consequently we have to draw our conclusions from the history and the subjective sensations of burning and itching described by the sufferer. I have said enough, however, for the present, to show that Hebra's dictum must not be pressed too closely in actual practice.

I. In order to make a successful examination of a patient suffering from skin disease, it is very necessary to have some systematic method of procedure. The rule of the first importance in all cases is, to examine the different parts of the body on which any eruption is present. For this purpose, it is not generally necessary to expose a large cutaneous surface at one and the same time. The parts of the body should be examined in succession, and the state of each noted at the time of examination. The importance of this rule can scarcely be over-estimated; indeed, in some cases, it is almost essential to a correct diagnosis. Everyone is acquainted with the fact that dermato-syphilis may be present in no less than five or six different forms of eruption in one and the same individual; and further—and this is the point—some of these forms may be highly characteristic, while others would hardly serve as means of diagnosis. Under these circumstances, a partial examination might lead to grave error and entail an unsuccessful course of treatment.

II. In conducting an examination, the following points should be kept in mind. Our object is, in the first instance, to take a general view of the efflorescence as a whole, irrespectively of the particular elementary forms of eruption present (vesicular, papular, &c.). We do this almost instinctively, and comprehend at a glance the importance of combination and arrangement, or in other words, that this or that elementary lesion, taken singly, does not constitute the skin disease. Thus, when we speak of a vesicular, papular, pustular, or squamous skin disease, we convey but a very imperfect idea of its nature. The parts of the body affected, the tissues involved, the form, arrangement, and grouping of the eruption, the degree of inflammation, and many other points, are often of more importance than the minute anatomical details. The mode, then, of speaking of skin diseases as papular, vesicular, or pustular, must be regarded as an abridged form only, and analogous to short-hand writing.

Having, however, in the first instance, regarded the skin disease as a whole, we may proceed, in the second place, to take notice of those separate parts which, combined, constitute the affection; or in other words, we may, as it were, dissect the eruption into its component elements.

1. In any given case under observation, we must distinguish what is essential from what is non-essential or accidental; what belongs to the original affection from what has been superadded; and we should select for especial examination those portions of the skin in which the disease is least complicated. For example, in order to demonstrate the presence of the itch-acarus, we do not choose a part of the body that is thickly covered with eczema, but we endeavour to find it in a patch of soft skin nearly free from secondary inflammation. Endless examples might be given of the modifications that skin diseases undergo from being complicated with such common inflammations as eczema and urticaria, or even from the excoriations produced by

constant scratching or injudicious treatment; but enough has been said on this point to suggest the necessity of care in distinguishing the essential from the accidental.

2. We should note the extent to which the anatomical elements of the skin are affected; whether, for example, the disease is merely confined to the cuticular layer, or whether the true skin is also involved; whether the hairs or sebaceous glands are affected; whether there are any alterations in pigmentation and colour. The importance of these inquiries is evident, as they lead us to determine by observation the original anatomical seat of the disease and the extent to which the neighbouring tissues are implicated. In order to ascertain these points, it is necessary to be acquainted with the character of healthy skin—that it is soft, smooth, elastic and slightly greasy, and that great differences in thickness and colour may be natural and compatible with perfect health; that the smoothness and texture of healthy skin vary greatly in different parts of the body, it being generally thicker and rougher on the exposed sides than on the flexures or inner aspect of the limbs; that certain variations in the growth, colour, and texture of the hair, as well as of the skin, depend upon the age, sex, or race of the individual, and may be regarded as normal rather than pathological.

Bearing in mind, then, the conditions of healthy skin, we are in a position to examine in detail the abnormal changes in its various component parts.

a. In investigating the condition of the epidermis, it is easy to see whether the surface is unusually rough, cracked, dry, or scaly; whether it is thickened by the accumulation of epithelium, as in psoriasis, or abnormally thin and transparent, or whether its outer layers are raised by the formation of blisters, vesicles, or pustules. By the aid of a common magnifying glass, we can further determine the state of the orifices of the follicles, whether they are plugged with sebum, as in comedones, or pouring out an abnormal quantity of oily secretion, as in some forms of stearrhœa. And lastly, we may observe whether papules exist, formed either from the hair follicles, or by enlargement of the existing papillæ of the skin.

b. Any alterations in the true skin will also demand our attention; and here the hand may often aid the eye in the process of investigation. The tense and brawny feeling due to excessive infiltration is better determined by touch than by sight. Again, in furuncular diseases the extent to which the inflammation involves the deeper tissues may be often more easily felt than seen.

c. Our attention should also be directed to the colour of the skin. Divergence from the normal hue may be due to an altered degree of vascularity, to hæmorrhage, irregular pigmentation, jaundice, or other causes. If redness be the result of increased vascularity, it will disappear for the moment under pressure of the finger, as in urticaria. If, on the other hand, the colour be due to hæmorrhage, it will be unaffected by pressure, as in purpura, or a bruise; and in this case we further note the various changes which the hæmorrhagic patch undergoes, from different shades of red and purple, to green and yellow, until it finally fades away entirely. Pigment-spots do not undergo rapid changes; moreover, the colour is generally some shade of brown, while the absence of pigment is marked by perfectly white patches. Alterations in pigmentation are especially common in dermato-syphilis, elephantiasis Græcorum, chronic eczema, psoriasis, prurigo, and alopecia areata; while, in some leucodermic affections, an irregular or defective pigmentation constitutes the whole disease. In determining the degree and kind of changes met with in pigmentation, care is required. The extremely dark skin natural to some people may lead us into the error of supposing that the development of pigment is abnormal, while in leucodermic and allied affections we may easily be deceived by the effect of contrast. The skin around a white patch always appears darker than it really is; on the other hand, we must not forget that there is often a true abnormal accumulation of pigment in the neighbourhood of leucoderma. Again, the deficiency of colouring matter in a patch of skin affected with alopecia areata might escape observation, though everyone would notice the light colour of the hairs first reproduced.

d. In affections of the beard, scalp, &c., it may be necessary to make an examination of the hair, both shaft and root. By extracting one or two with a pair of forceps, we determine at once whether the force required for their removal is less than in health, and also whether the hair itself is abnormally brittle, as in common ringworm. Subsequently, we may examine one of the hairs under the microscope, first without and then with a little liquor potassæ, which renders it more transparent; we shall thus be able to note any change or abnormal growth in the structure of the hair and its bulb. This is especially important in dealing with doubtful cases of tinea tonsurans or favus.

In most affections of the skin and hair, some cutaneous regions may be found in a healthy condition, and we must use these for comparison with the unhealthy parts, just as in disease of the lungs we are in the habit of comparing the sound with the unsound side of the body, or as we compare a shortened limb with its fellow of the opposite side.

3. The form or shape of the patches of eruption must be next considered. In order to impress the importance of this point, it will only be necessary to illustrate it by examples. In syphilis, the prevailing shapes assumed by the eruptions and ulcerations are circular, horseshoe, and gyrate. In ringworm, the original patches are circular. Zoster follows the course of particular nerves, hence its characteristic forms. Gutta rosea and erythematous lupus are often butterfly-shaped; the patches of erythema nodosum are rounded or oval and tumid. Many other examples might

be given, but enough has been said to call attention to the fact above mentioned, and to indicate its possible value in diagnosis.

Hitherto, I have considered only the component parts and forms of separate patches of eruption, complete in themselves, but occupying, it may be, circumscribed areas. It is often, however, necessary to extend our field of observation and compare or contrast eruptions met with at the same time in different parts of the body. As I have before stated, the coincident appearance of different kinds of cutaneous eruption in one and the same individual is one of the characteristics of syphilis.

III. I pass on to consider, in the next place, the subject of locality and its bearings on diagnosis. Some skin affections are strictly local, not only in contradistinction to general, but also as being located in certain regions of the body only. As a rule, when eruptions appear on various parts of the body at the same time, we may suspect either a constitutional tendency to the malady or a specific poison pervading the system. The efflorescence of fevers and syphilis is an example of the latter; that of psoriasis and eczema of the former. Some diseases, however, are invariably confined to certain localities, as, for example, acne rosacea to the head and neck, sycosis to the hairy parts of the face. Other affections never invade certain regions; thus, scabies in adults is never present on the face or scalp, or acne on the soles or palms. By a process of exclusion, then, we should never apply the term acne rosacea to a red patch situated on the thigh, or call an eruption on the face scabies. Other skin affections, while they are not strictly confined to one locality, yet have a marked preference (if I may use the expression) for certain regions. For example, erythema nodosum is common on the legs, acne on the face and shoulders, pityriasis versicolor on the trunk, lupus on the face, lepra on the extensor sides of the elbows and below the knees, alopecia areata on the scalp and eyebrows;

to these many more might be added. Let us take an example in point; if we meet with an eruption, say on the soles of the feet, we know at once that it is either scabies or eczema (probably dry and cracked, and often miscalled psoriasis), or dermato-syphilis, for these are the only diseases (with rare exceptions) that affect the soles. The conclusion I would draw from these remarks is, that the locality of the eruption is an element of importance in our diagnosis.

IV. Hitherto I have dealt exclusively with those phenomena in skin affections which are at once appreciable by our senses of sight and touch; namely, the character of the eruption, the tissues involved, the degree of inflammation, the shape of the patches, and the regions affected. These are all patent to our observation; and for these observations and the conclusions to be drawn from them we are exclusively responsible. There are, however, other means of diagnosis, less perfect in their nature, and less under our immediate cognisance. I refer to the subjective sensations of the patient himself. The more important of these are sensations of itching, burning or tingling, and darting neuralgic pains. With regard to the first of these—namely, itching—we are not dependent entirely on the statement of our patient. On the contrary, we may often determine the presence of itching by the well-known marks produced from scratching; and the study of these marks affords a not unimportant field of observation, for some skin diseases derive their most characteristic features from being scratched. For example, prurigo from pediculi consists of a papular eruption which would often escape observation—does, indeed, in the paralysed—if the process of scratching did not remove the tops of the papules and lead to a slight hæmorrhage. It is the little spots of coagulated blood which especially attract our attention, and give to the disease its most striking and distinctive feature. Sensations of burning and tingling are characteristic of all forms of urticaria and allied affections, and are present also in gutta rosea; while acute neuralgic pains are often attendant upon zoster, and are occasionally met with in alopecia areata and urticaria. The traces of scratching are often, as I have said, very characteristic. In prurigo, scabies, and eczema, we have excoriations and little hæmorrhages produced on the surface of the skin; in urticaria, long red wheals or striæ; while in chronic affections of all kinds, attended with severe pruritus, we find an augmentation of cutaneous pigment, the result of the constant stimulation by scratching. To illustrate the importance of these signs as a means of diagnosis, it is only necessary to remember that, where they are present, we at once conclude that we have probably to deal with one of the following diseases; namely, scabies, eczema, lichen, urticaria or its allies, and prurigo or morbus pedicularis. The sensations of burning and smarting do not lead to any changes in the appearance of the skin, and consequently we depend for our information entirely on the statements of our patient.

V. We all recognise the importance of the history of a case in our ordinary diagnosis of disease; but it is not so obvious that, in dealing with skin diseases, the same rule applies, and that we require to know the history before we can arrive at a complete diagnosis. Now, if the problem were merely to give a name to any particular skin disease before us, it may be granted that this can be done without inquiry into the antecedents of the case; but if in a correct diagnosis we include, as we ought to do, something more than this, if we take into consideration all the facts in connection with it that may bear upon treatment or prognosis, then the history and general condition of our patient become matters of real importance. Let me illustrate this point. Suppose, for example, three patients present themselves in succession for examination. The first shows you his arms covered from the back of the hand to the elbow with a minute red papular eruption, attended with sensations of burning and itching. The eruption ends abruptly at the bend of the elbow; it is at once recognised as eczema in the papular stage. From the history, we find that his forearms have been exposed at cricket to a burning sun; we consequently conclude that the eruption is the effect of heat and exposure, and will probably disappear in a few days. In the second patient, there are red, excoriated, and weeping patches of skin on the inner sides of the thighs, the axillæ, and other parts of the body, which are evidently eczema; and we further find that our patient has been *for some weeks* rubbing into the skin a strong sulphur ointment, with the view of curing a real or supposed scabies. Here, again, we have to deal with an eczema, but one developed from different causes and under different circumstances. In this case a discontinuance of the use of the sulphur ointment will probably lead to a rapid cure. In the third case, a middle-aged man suffers from dry, scaly, and very irritable patches about the flexor sides of the limbs. This is still eczema; but we learn that he has had similar patches on several previous occasions, and that he has had gout more than once. We know then that we have to treat chronic eczema in a gouty man, and we adapt our remedies to meet the case. In all these three instances, then, the name of the eruption is identical. In all three, we have to deal with eczema, but eczema of different kinds, and produced in very different ways. Merely, then, to pronounce a skin affection to be eczema is, I maintain, but a *very imperfect diagnosis of the disease.* We are so apt to be deceived by a mere name. The diagnosis of any malady is only valuable in as far as it leads to correct treatment and prognosis, and any method that stops short of this is a very imperfect one. In other words, the consideration of the etiology of a disease is in many cases essential to the diagnosis.

From what I have said, it will be inferred that I use the expression 'history of a case' in a comprehensive sense, and include the following points, which all bear more or less on a full and complete diagnosis: (1) Age and sex of the patient; (2) Occupation or mode of life of the patient; (3) Past history; (4) Present condition.

With regard to (1) the age and sex of the patient, I would only remind you that certain skin affections, like the diseases of other organs, are almost unknown at particular periods of life, and that some diseases are exclusively confined to one sex. For example, acne is not met with in babies, or sycosis in women. Tinea tonsurans of the scalp is an affection of children, and pityriasis versicolor of adults. True ichthyosis is a congenital affection, and therefore may be excluded when we have to deal with a disease making its first appearance in adult life. (2) With regard to occupation and mode of life, it will be sufficient to indicate that certain skin affections are produced by particular occupations, and that others are common only amongst certain classes. (3) The past history includes both that of the *patient* and of the *eruptive* attack. The past history of the *attack* must be in many instances of primary importance. Thus, for example, we may have to deal with cases of urticaria, in which the visible effects on the skin are the same, but which spring from very different causes. One may be due to poisoning by shell-fish, another to a continued course of copaiba, a third to the irritation of pediculi, and a fourth may be purely an affection of the nerves. To be satisfied, then, with the mere name (urticaria) would be as unreasonable as it would be to treat all four cases in the same way. In order to arrive at the past history of the patient, it will often be advisable to draw our conclusions from indirect questions and observations. Thus, in investigating a suspected syphilitic eruption in a woman, the indirect method is almost always preferable. Often the nature or even the existence of the primary inoculation is unknown to the patient, while she is well aware of having suffered from ulcerated sore-throat, or nocturnal pains, or of having miscarried. But we are not always dependent on the statements of our patients in arriving at conclusions as to their past history. Scars are often left on the skin or about the fauces which are silently eloquent of former disease.

In stating that the general condition of health is an essential consideration for a comprehensive diagnosis of skin affections, nothing more is intended than that diseases of the skin, like the diseases of other excreting organs (for example, the kidneys), are often associated with certain constitutional states or diatheses, and sometimes with special diseases of other organs; in other words, that the skin affection, in many instances, cannot be regarded simply as an uncomplicated local malady. These remarks apply especially to such diseases as small-pox, chicken-pox, syphilis, and elephantiasis Græcorum, where the skin affection is only a small part of the malady; but also in a less degree to such affections as eczema and psoriasis, which are so often associated with either a gouty or scrofulous diathesis. But, further, we often find skin affections influenced by disease of particular organs. For example, not long ago, I had under my care in the Middlesex Hospital two severe cases of the pityriasis rubra of Hebra, associated with chronic albuminuria, and we remarked in both cases that when the condition of the skin improved for a time the albumen diminished, and *vice versâ*; this occurred so many times that it would be impossible to regard it as an accidental coincidence. It is immaterial for the purpose of my illustration whether the temporary improvement in the action of the kidneys produced a change in the skin, or *vice versâ*. The fact that some skin diseases, such as scabies, are purely local, does not in any way disprove the truth of my proposition, that we must regard a pathological condition of the skin just as we should regard a pathological condition of any other organ of the body, and that without this our *diagnosis is incomplete.*

To sum up the foregoing remarks, we may lay down the following brief rules for our guidance in the examination of diseases of the skin. 1. Examine all parts of the body in which an eruption is present; 2. Take a general view of the eruption regarded as a whole; 3. Separate it into its component parts, and distinguish what is the essence of the disease from what has been superadded; 4. Notice the tissues involved, and the presence or absence of infiltration, inflammation, &c.; 5. Notice the form or shape of the patches of eruption; 6. Observe the locality affected; 7. Investigate the subjective sensations of itching; 8. Ascertain the past and present history and general condition of the patient.

CHAPTER II.

ELEMENTARY LESIONS.

On the Elementary Lesions of the Skin, and their value as a means of Diagnosis.

In order to estimate the value of the so-called *elementary lesions* of the skin as a means of diagnosis and classification, it is necessary to discuss briefly their pathology, so that a definite anatomical meaning may be assigned to the terms in use, which at present are often applied somewhat vaguely by dermatologists.

Diseases of the skin, regarded simply from a pathological point of view, may be roughly divided into four principal groups: (1) Those which are the result of inflammation of the skin; (2) Those due to abnormal conditions of the secreting apparatus; (3) Affections which depend on an altered state of nutrition, and include hypertrophic and atrophic changes; (4) Morbid growths of the skin.

It is to the first of these groups that the *elementary lesions* of the skin especially belong. These lesions are of two kinds, those called *primary* and which for the most part appertain to the inflammatory process, and those which are *secondary* and only the indirect or accidental results of that process.

The chief primary lesions are, active congestions and the formation of papules, wheals, vesicles, bullæ, pustules, and squamæ; all these belong essentially to inflammatory changes in the skin. It has been usual to describe *tubercles* as elementary lesions, but the term, as applied to the skin, is of a very uncertain signification, and does not admit of a precise pathological definition. The tubercle of dermatologists generally means any small raised tumour, and is chiefly used in describing hypertrophic changes and morbid growths. If the word is to be retained, it should not be classed amongst such well-defined changes as vesicles and wheals.

Abnormalities in pigmentation are often of value in the diagnosis of skin disease, but are not peculiar to cutaneous structures; and it will be more convenient to discuss them apart from elementary changes.

The principal so-called *secondary* changes are those of ulceration and cicatrisation; but both are very important processes, and, like pigmentation, are not peculiar to the skin. Desquamation and the formation of excoriations and crusts are very properly regarded as secondary changes. Unless a more precise definition be given to the elementary lesions of the skin than has hitherto been adopted by writers, no very distinct pathological value can be attached to them. For example, when lesions so anatomically distinct as inflamed papillæ, and small projecting collections of 'sebaceous matter within the follicles,' are both equally called *papules*, what pathological value can be assigned to the terms? Again, the word '*squamæ*' is often applied to several scaly-like structures, having a superficial resemblance, but which are anatomically distinct. For example, it is applied to the scales of lepra, which are formed entirely by inflammatory overgrowth of epidermic cells, but also to the peculiar crusts of ichthyosis, which are composed of the hardened accumulation of sebaceous matter and cuticular *débris*, and in no way connected with an inflammatory process.

So strong, indeed, has been the influence of Willan's system of classification, which is based solely on elementary lesions, that we find some writers, even of the present day, classing psoriasis and ichthyosis together, under the head of scaly diseases.[1] In the following remarks I shall endeavour to give as precise an explanation and definition as is possible of the different elementary lesions of the skin, and to point out how far they are of value as a means of diagnosis.

Active hyperæmia or congestion, to which I have referred as the first elementary lesion, cannot be regarded as distinctive of any one form of skin disease, but is common to many; as, for example, scarlatina, urticaria, erythema, and eczema. It may be merely the first stage in a progressive inflammation, or, on the other hand, it may itself constitute the whole inflammatory process, there being no tendency to pass beyond it; a just estimate of this important fact is of great value in the diagnosis of eruptions. As a rule, *diffuse active hyperæmia which extends symmetrically over the whole or a large portion of the body* is indicative of some general disturbance of the system, such as is produced by fever or other poisoning, whether natural or artificial. On the other hand, *unsymmetrical circumscribed hyperæmia* is more commonly the first stage in some local inflammation of the skin.

The formation of *papules* next demands our attention; they differ from each other in size, degree of vascularity, in the quality of the exudation, and some other minor points. The larger papules are formed by a copious exudation or by the combination of several smaller papules into one mass. Small papules, such as we have in measles, are formed by the exudation of serous fluid into the papillæ around the hair follicles. The degree of papular vascularity is much influenced by the nature and extent of the exudation; in other words, the exudation in some cases presses the blood out of the capillary loops, and then a comparatively pale papule is formed. Hard persistent papules are generally produced when the exudation is of a plastic kind, as in lichen planus. Now, just as there are some diseases in which active cutaneous congestion is only the first of a series of pathological changes, and others in which it is final; so also with regard to papular-eruptions, they may be simply a *second stage* in the inflammatory process, to be succeeded by a third and perhaps a fourth, or their development may be the end, or rather the acme, of the process—the inflammation being normally complete at this point, the subsequent changes being simply those of degeneration and absorption of the products. As examples of the former may be mentioned the papular stage of eczema or varicella, which is normally transient, and of the latter, the eruption of measles or of lichen planus, in which there is little tendency for the papules to become vesicles or pustules.

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[1] One might, with almost equal propriety, class serpents and fish together as scaly animals.

Eruptions, in which the papule marks the acme of the inflammatory process, are of two kinds: Firstly, those characterised by the presence of *serous papules*, in which the exudation into the papillary bodies is simply a serous fluid, and therefore readily re-absorbed; Secondly, those in which the exudation is of a plastic and therefore of a harder, and more persistent nature. To the former of these belong the papular eruptions of measles and rötheln, and also a variety of rubeoloid rashes, met with exceptionally in the early stages of many acute diseases, and possessing no special distinctive characters. To the plastic kind belong the eruptions of papular skin diseases proper—namely, *prurigo*, *lichen planus* and *lichen scrofulosorum*.

From what has been said it will be inferred that, regarding papular eruptions as a *means of diagnosis*, it is of the first importance to determine the following points: (1) whether the eruption is in a *transitional stage*, to be succeeded by a further development of the inflammatory process, or whether it is the *acme of that process*; (2) if the latter, whether the papular eruption, having attained its highest point of normal development, is simply the result of hyperæmia and serous exudation into the papillæ, indicative of a *general febrile attack*; or (3) whether the exudation, being of a plastic nature, has led to the formation of a solid, hard, durable papule, indicative or pathognomonic of one of the *true papular diseases* of the skin to which I have already referred.

The formation of vesicles takes us a step further in the inflammatory process. The development of an inflammatory vesicle is very simple; the serous exudation poured out from the capillaries passes through the rete mucosum, but cannot pass the outer compact and horny layers of the epidermis, which are consequently raised and separated from the deeper tissues by small circumscribed collections of serous fluid. These little blisters are called vesicles or bullæ, according to the size they attain; bullæ in fact are simply large vesicles.

In estimating the *diagnostic value* of an eruption of *vesicles* it is necessary in the first place to distinguish miliary vesicles, which are pathognomonic of excessive sweating, from those of an inflammatory kind; and in the second place to remember that an eruption of vesicles or bullæ is not confined to any one class of cutaneous inflammations, though no doubt their formation is the *rule* in some diseases and the *exception* in others. Thus, for example, it is the rule in those diseases which are commonly called vesicular or bullous, such as eczema, herpes, and pemphigus; the exception in others, such as measles and erythema.

Lastly, vesicles, as such, have but a short existence; for if they do not quickly dry up and disappear, they become converted into pustules, or more commonly their thin walls break and their contents escape. When this happens to a crowded crop of vesicles, as is often the case in eczema, a patch of skin is left denuded of its outer layer of epithelium, and pours out from its excoriated surface an albuminous fluid, which has the property of stiffening linen as it dries, and is highly characteristic of this inflammation in one of its stages.

I have already referred to the fact that vesicles, instead of bursting or drying up, may become converted into pustules, and this may be regarded as a further development of the inflammatory process; in other words, an acute serous catarrh may become a purulent catarrh. Pustules developed in this way are, however, not the only kind met with in inflammation of the skin. Three distinct varieties are usually recognised: (1) the acne pustule; (2) the simple or catarrhal pustule; (3) the pock or small-pox pustule. With regard to the first of these, *the acne pustule,* it may be at once stated that it is not a pustule at all in the strict histological sense, but a kind of furunculus or boil, developed under special circumstances. This acne boil goes through none of those special changes which are observed in the formation of pustules proper; it is, in short, a deep-seated inflammation around a hair follicle or sebaceous gland, leading to the production of pus, and very generally to the formation of a small slough and consequent scar. If every small collection of pus, irrespective of its position in the skin and mode of origin, be regarded as a pustule, then, and then only, can inflamed acne spots be called pustules.

The *catarrhal pustule* is formed by a change in the contents of a transparent vesicle, which first becomes opalescent, and as the pus-cells increase and multiply, assumes a perfectly opaque and yellow appearance, often without any alteration in shape. We see from the mode of its formation that the catarrhal pustule may be defined as a small circumscribed collection of pus of rounded form, and situated immediately beneath the epidermis. Pustules of this kind are met with in many diseases of the skin, notably in eczema, scabies, herpes, pemphigus, and ecthyma, and it will be at once obvious that their presence cannot be regarded as *distinctive* of any well-defined group of inflammatory skin affections. Not only are vesicles frequently converted into pustules, but excoriated surfaces, from which in the first instance a clearish albuminous fluid is secreted, may be so changed in their character as to pour out a purulent discharge. As the sore heals, the secretion of pus diminishes and has a tendency to form dark and yellowish crusts which cover the denuded surface.

The *pock* differs in some important respects from the catarrhal pustule. The papule first formed is converted into a vesicle in the usual way by the serous fluid of the papillæ finding its way into the epidermis; but the fluid does not pass rapidly through the deeper layer of the epidermis, and thus form a single cavity, filled with fluid, as is the case with the catarrhal vesicle; on the contrary, the process in the pock is more gradual, the deeper cells of the epidermis become distended with fluid, displaced and converted into the so-called chambers, and no separation occurs of the outer from the deeper layers of the cuticle. The fluid is, in fact, chiefly contained within the cells and not in an artificial cavity, and it is this difference which constitutes the most important anatomical distinction between the two kinds of vesicles or pustules. It, moreover, fully explains the fact that a single puncture will not evacuate the vaccine or small-pox vesicle.

To recapitulate briefly. In the catarrhal vesicle or pustule there is a rupture of continuity and the formation of a single cavity filled with fluid between the outer and inner layers of the epidermis. In the pock there is no such cavity; it is, so to speak, a solid structure, the fluid being contained chiefly within cells. This essential difference is the result of a *different* mode and rate of development. Examples of both forms of pustule are met with in syphilis. Lastly, umbilication and scarring, though far more common in the pock than in the catarrhal vesicle, are not strictly confined to the former.

With regard to the diagnostic value of the pock eruption, I would point out that there are only a few diseases in which it is commonly met with—namely, variola, vaccinia, and sometimes varicella, and also in syphilitic eruptions resembling those diseases. I believe, however, that the pock may occur in other diseases of the skin as an accidental formation.

Taking a general view of pustular eruptions, we at once recognise the fact that simple pustules are met with in many and various diseases of the skin which bear little or no relation to each other, and therefore their value for the purposes of classification and diagnosis is not very great. The formation of the pock is, however, of more diagnostic value than that of the simple pustule, inasmuch as it is limited to a small number of diseases.

The next form of elementary lesion which I propose to consider is the *wheal*. It has a close relation to active hyperæmia of the skin, and to the serous papule, and, therefore, on anatomical grounds should be discussed with these forms of eruption; it is more convenient, however, to consider it separately.

The *wheal* consists of a circumscribed swelling of the skin attended with active congestion of the vascular layer and an exudation of serum into the immediate neighbourhood of the vessels, but this exudation does not usually extend into the epidermic structures. The degree of swelling is very variable and depends on the amount of exudation. The occasional, almost sudden, disappearance of these curious formations is explained by the close proximity of the serous exudation to the absorbing vessels, for when the fluid finds its way into the epidermis the process of resorption is much slower, and the traces of the inflammation are often left behind for several days. The pale appearance of the central part of a wheal compared with the circumference, is said to be due to the increased pressure of the exudation at that point, which is often so great as to empty the capillaries of the skin; it is, however, really due to a spasmodic contraction of the muscular coat of the vessels, at least this is the more probable explanation. Associated with the formation of wheals, we often find scattered serous papules (as in lichen urticatus), which is not surprising, when we consider the close anatomical relation which exists between them. As I have already said, the exudation is generally confined to the true skin, but in severe cases of urticaria we occasionally find that the serum forces its way into the epidermis, and leads to the formation of vesicles or blebs.

Although we must regard the formation of wheals as a kind of inflammation, yet it differs from most other inflammations of the skin in being far more strikingly under the influence of the nervous system. In most cases the subjective nervous phenomena of tingling and itching are out of all proportion to the amount of inflammation. And, again, the remarkable degree in which reflex action will lead to the production of wheals under certain conditions of the nervous system—as is evinced by the slightest scratch on the surface of the skin—points to the same conclusion; and further, the fact that urticaria is often associated with neuralgic attacks, sometimes alternating with them, and at other times replacing them for days together, leaves no doubt of the very close relation which exists between them.

The *diagnostic value of wheals* is great, for their presence may be regarded as pathognomonic of urticaria. It is true that under the name urticaria we include very different conditions of the system which give rise to the same local phenomena, but as far as the skin is concerned, all forms of urticaria, though they differ in appearance, are very closely related.

The last of the primary elementary lesions to which I have referred is the *squama* or scale proper, which I define as formed entirely of dry and partially detached epidermic cells, produced by an inflammatory overgrowth of the cuticle, without exudation. As thus defined, scales are almost pathognomonic of psoriasis; they may also be occasionally found in dermatosyphilis. A more extended use of the term *scale*, is, however, very common, and includes many scale-like structures which are more properly scaly crusts, such as we find in ichthyosis, seborrhœa, and dry eczema.

I fully admit that in the latter disease there are certain stages when the crusts are chiefly made up of epidermic structures, and when it is difficult to find, even with the aid of the microscope, evidence of any exudation; nevertheless a careful examination generally reveals its presence. Theoretically, the distinction between eczema and psoriasis—that in the former there is a serous exudation, and in the latter there is not—is very perfect; but in practice this distinction is not always evident. For example, there are many eruptions met with in gouty people of which it is very difficult to say whether they should be called scaly eczema or psoriasis.

In conclusion, I will briefly sum up what I have said in the foregoing remarks.

(1) I have insisted on the importance of assigning a definite meaning to the terms in use to express the pathological changes in the skin. These terms are the A B C of our dermatological language; and if A means both A and B at the same time, we shall have endless difficulties in reading that language aright.

(2) I have pointed out that the value of elementary lesions as a means of diagnosis and secondary classification has been and is still over-estimated. For example, the vesicle, the bleb, and the pustule are associated in several inflammatory diseases of the skin, which bear little or no relation to each other, and yet they are still used for the purpose of subdividing inflammatory affections; whereas they are indicative of the stage or degree of inflammation rather than of any particular disease.

(3) It must be remembered that certain elementary lesions, viz., the hard persistent *papule*, the *pock*, the *wheal*, and the *scale proper* are respectively found in only a comparatively small number of skin affections, and are consequently of considerable diagnostic value.

CLASSIFICATION.

CLASS I.—INFLAMMATIONS.

SUB-CLASS I.—THE EXANTHEMATA, INFECTIOUS INFLAMMATIONS HAVING A DEFINITE ACUTE COURSE.

Variola—Varicella—Morbilli—Scarlatina—Rötheln.

SUB-CLASS II.—NON-INFECTIOUS INFLAMMATIONS HAVING AN INDEFINITE COURSE.

Group 1.—*Erythematous Group.*

Erythema multiforme—Erythema nodosum—Roseola—Hydroa—Erysipelas—Urticaria.

Group 2.—*Herpetic Group.*

Herpes Zoster—Herpes facialis—Herpes gestationis—Cheiropompholyx—Pemphigus.

Group 3.—*Eczematous Group.*

Eczema—Pityriasis rubra—Porrigo contagiosa—Ecthyma.

Group 4.—*Lichenous Group.*

Lichen ruber—Lichen circinatus—Lichen planus—Lichen scrofulosorum—Prurigo—Relapsing prurigo.

Group 5.—*Psoriasis Group.*

Psoriasis.

Group 6.—*Furuncular Group.*

Furuncle—Anthrax—Aleppo bouton.

Group 7.—*Acne or Pimply Group.*

Acne—Sycosis—Acne rosacea.

Class II.—HÆMORRHAGES.

Purpura simplex—Purpura hæmorrhagica—Purpura rheumatica—Scurvy.

Class III.—DISEASES OF THE SKIN-GLANDS.

1. Of the Sebaceous Glands.

Comedo—Milium—Steatorrhœa—Molluscum contagiosum.

2. Of the Sweat Glands.

A. Functional—Hyperidrosis—Bromidrosis—Chromidrosis—Anidrosis.

B. Structural—Hypertrophy.

Class IV.—DISEASES OF NUTRITION AND GROWTH.

Group 1.—*Hypertrophies.*

A. Of the Epidermis.

Lichen pilaris—Clavus—Verruca—Cornua—Hypertrophy of the nails.

B. Of the Corium.

Elephantiasis Arabum—Scleroderma—Addison's keloid.

Group 2.—*Atrophies.*

Atrophy of the cutis—Atrophy of the hair—Atrophy of the nails—Alopecia—Alopecia areata—Trichoclasis.

Group 3.—*Hypertrophic Malformations.*

A. Diffuse.

Ichthyosis.

B. Circumscribed.

Fibroma—Elephantiasis teleangiectodes—Nævus.

Group 4.—*Anomalies of Pigmentation.*

Leucoderma—Canities—Ephelis—Lentigo—Chloasma—Melasma.

CLASS V.—NEW FORMATIONS.

1. Lupus vulgaris—2. Lupus erythematosus—3. Epithelioma—4. Keloid—5. Xanthoma.

CLASS VI.—GENERAL CONSTITUTIONAL DISEASES.

1. Dermatosyphilis —2. Elephantiasis Græcorum—3. Frambœsia (Yaws).

CLASS VII.—NEUROSES.

Pruritus.

CLASS VIII.—PARASITIC DISEASES.

1. Animal.

Scabies—Phthiriasis.

2. Vegetable.

Tinea tonsurans—Favus—Pityriasis versicolor.

CHAPTER III.

CLASS I.—*INFLAMMATIONS.*

SUB-CLASS I.—THE EXANTHEMATA, INFECTIOUS INFLAMMATIONS HAVING A DEFINITE ACUTE COURSE.

(1) *Variola;* (2) *Variola modificata,* Syn. *Varioloid, Hornpock;* (3) *Varicella,* Syn. *Chicken-pox.*

THESE diseases are all regarded by Hebra as forms of small-pox; and Neumann, who follows him, says: "We assume three forms of variola, each according to the intensity of the process—1. Variola vera, duration thirty-one days. 2. Varioloid, duration twenty-one days. 3. Varicella,[1] duration fourteen days. The morbid process is the same in all the three forms. The eruptions, as well in their anatomical structure as in their appearance, are entirely identical, and the intensity of the disease alone varies. In variola vera there are more efflorescences on the skin than in varioloid, and more in the latter than in varicella. Therefore, the *duration of the morbid process,* which stands in exact relation to the number of efflorescences and the intensity of the phenomena, serves as the peculiar characteristic of the different forms of variola." Now, the two points on which particular stress is laid in the above statement are: (1) that the duration of the morbid process, and (2) that the intensity of the disease are in proportion to the number of efflorescences, and that this number is less in varicella than in varioloid. With regard to the first point, it is remarkable that the duration of varicella, though about ten to fourteen days, is yet very uncertain in any given case, and in this respect contrasts with small-pox, which is very constant. And secondly, I must deny altogether that the number of efflorescences is always less in varicella than in varioloid. On the contrary, I have seen many cases of the latter disease where the number of vesicles formed was very small, and yet in which the premonitory fever was much greater than in any case of varicella with three or four times as many spots. Were it not that such distinguished men as Hebra and Neumann hold the identity of the two diseases, it would be unnecessary to discuss the subject further.

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[1] It may be said that Hebra uses the term varicella in an unusual sense; if so he omits the consideration of *our* varicella altogether.

In the differential diagnosis of small-pox and chicken-pox, the following points of distinction should be remembered:—

	Variola	Varicella
1. Period of incubation	Very constant; thirteen times twenty-four hours. The febrile symptoms appear on the fourteenth day	Variable; but about the same as in variola
2. Premonitory fever	Well marked; attended with severe lumbar pains, head-ache, and often vomiting. The same in varioloid or variola vera	Very slight indeed; often not observed at all
3. Time of eruption on the skin	About forty-eight hours after the onset of the fever. Generally most abundant on the face, where it is first seen	Variable. Often first seen, and most abundant, on the back
4. Appearance of eruption in early stage	The papules, or vesicles, in their early stage, have a *hard* feeling, like shot under the skin	Vesicles always *soft* and small. They mature much more rapidly than in variola

	Variola	Varicella
5. Eruption on mucous membrane	Eruption almost always early seen at the back of the pharynx, and that region	Only rarely seen on pharynx
6. Eruption on skin	Appears in one crop, which is mature on or about the tenth day of the attack in variola vera and the sixth in varioloid	Successive crops, so that the eruption is seen in different stages of development at the same time
7. Duration	Three to five weeks	Very variable; average about ten days
8. Amongst those vaccinated	Is most common in adults	Is most common in children
9. Vaccination	Protects	Affords no protection whatever
10. A previous attack of varicella	Affords no protection against variola	Protects against a second attack of varicella

11. Varicella always reproduces varicella and never variola, and *vice versâ.*

12. Varicella is always endemic in our towns, but with *frequent epidemic* accessions. Small-pox is more distinctly epidemic, and its returns are separated by much longer intervals.

Much importance as a mark of distinction has been assigned by some writers to the supposed fact that the vesicles in chicken-pox are 'not umbilicated,' and that 'no sloughs are formed.' Here we have two errors, for in varicella, as in herpes and some syphilitic eruptions, umbilication and the formation of sloughs are not uncommon. The 'marking' of varicella is exactly the same as that of small-pox, though it does not occur so frequently. For the purpose of differential diagnosis, stress is laid, and rightly laid, on the fact that in variola, whether modified or not, the eruption appears in one crop, whereas in varicella there is a succession of crops (though following each other rapidly), so that we see in one individual, at the same time, papules, vesicles, and pustules in various stages of development. It is worthy of remark, however, that a similar appearance is sometimes produced in varioloid, but in a different way; namely, by the abortive development of *some* of the spots, so that they do not run a normal course, but stop short and dry up in an early stage, while others are developed as usual.

Differential Diagnosis of Variola from (1) *Measles*; (2) *Scarlatina*; (3) *Acne*; (4) *Glanders*; (5) *Syphilitic eruptions.*

Morbilli papulosi may be mistaken for variola; but it is only at the onset of the eruption, and when measles is of the *papular*, not the macular variety that this mistake can occur. In both diseases the eruption is probably first noticed on the fourth day; for, although in measles the period of the premonitory fever is about seventy-two hours, and that of small-pox somewhat less, yet the difference is not great, and the paleness of the papules of small-pox compared with measles makes them less observable at an early stage. The following rules should be attended to in doubtful cases:—

1. It is most important to make a careful examination of the *mouth and pharynx*, for on the fourth day of the fever variola spots in this region are more advanced than on the skin, and may often be seen as distinct vesicles which cannot be mistaken for the eruption of measles.

2. The small size, pale colour, and hard and shotty feeling of the small-pox papule may be contrasted with the larger size and higher colour of the measles papule.

3. In variola the eruption is most advanced on the pharynx and face; in measles it is pretty uniform all over the body.

4. The most certain of all distinctions is to be found in the severe lumbar and sacral pains with vomiting, which are so common in small-pox, while the catarrhal symptoms and photophobia are characteristic of measles.

But whenever the symptoms are not distinctive on the fourth day, the diagnosis should be suspended for twenty-four hours; this will always enable us to solve the difficulty, for if the disease be measles it will then have assumed a more macular form, and if small-pox, the papules will have undergone further development.

Scarlatina.—The eruption of small-pox, as is well known, is sometimes preceded by a copious erythematous rash or roseola, which may be easily mistaken for scarlatina. The characteristic position of this rash is the lower half of the abdomen and the anterior aspect of the thighs, and when the rose rash is confined to this region we should be at once on our guard and suspect that we have to deal with a case of small-pox. The red rash is, however, by no means always limited to these spots, but may exist on other parts of the body, and I have on several occasions known it mistaken for scarlatina by experienced medical men, even during an epidemic of small-pox, and in truth the mistake is a very excusable one. It is well to recollect that the eruption in scarlatina first appears on the neck, and that this is not the case in the rose rash which precedes the eruption of small-pox. The character of the sore throat and 'strawberry' tongue in scarlatina will often serve to determine the nature of a doubtful eruption; but in the absence of these characteristics in a patient suffering from fever with severe lumbar pains, vomiting, and an erythematous rash on the abdomen and thighs, small-pox may with tolerable certainty be anticipated. Twenty-four hours will remove all uncertainty.

Acne.—It is only under very exceptional circumstances that the variety of acne known as *acne varioliformis,* which especially affects the forehead, can be mistaken for varioloid; the complete absence of febrile symptoms and the history of the case being usually quite sufficient for the purposes of differential diagnosis. If, however, the patient be coincidently suffering from some independent febrile attack, those unacquainted with small-pox might possibly be misled into forming an erroneous diagnosis. The presence of comedones in all forms of acne is a diagnostic point worthy of notice.

Glanders.—Of all diseases, perhaps glanders in an early stage is the one most likely to be mistaken for small-pox. This arises partly from its rarity—few medical men having seen many cases—and partly from the fact that the febrile symptoms of the disease are like those of variola and always attended with severe pains in the back and limbs, and not unfrequently with vomiting. The eruption too in an early stage of glanders is sometimes not unlike small-pox, and consists of hard infiltrations in the skin and mucous membrane, which quickly suppurate and form deep and inflamed ulcers. When these infiltrations are small and scattered, and ulceration has not yet begun, the difficulty in the diagnosis is by no means slight. For the purpose of differentiation the history and origin of the attack is of the first importance, for in a very large proportion of cases the sufferer is a groom or stableman, and will very often be aware of having been exposed to the contagion of glanders. In the second place, the eruption in glanders differs in appearance from small-pox, and moreover does not come out in one crop; although some spots may be found bearing a very close resemblance to the latter disease, others will co-exist which are too large to be mistaken for pustules of variola. Again, the rapid ulceration in glanders is very characteristic of the disease.

During an epidemic of small-pox, I was asked one day in the Middlesex Hospital to look at a case of supposed variola. The case had been seen by several medical men who had pronounced it a rather unusual form of small-pox. In favour of this view, variola was very common at the time, the man was suffering from severe fever with pains in the limbs and back, he had vomited and there was a scattered eruption on the face that might easily be mistaken for small-pox. I had, up to that time, never seen a case of glanders in an early stage, but I knew the symptoms of that disease and I was very well acquainted with the eruption of small-pox. On looking carefully at the eruption on the face, I was at once satisfied that it differed somewhat from small-pox. I then had the man stripped, and examined his body; here I found some distinct ulcers which I was sure were not due to small-pox. I also noticed that the fever was much too severe for varioloid in that stage, and on the other hand the amount and extent of the eruption did not correspond with variola vera; I then suspected that I had to deal with a case of glanders. On enquiry I found that the man was a groom who lived over a stable, but he stoutly denied having had anything to do with glandered horses; but with the able assistance of my friend Mr. R. H. Lucas, our resident medical officer, we at last elicited from the man's wife that he had been with glandered horses, and subsequently the man himself acknowledged the fact. He was admitted into the hospital, the case ran the usual course of glanders, and he died in the hospital.

Dermato-syphilis.—There are certain not very common forms of dermato-syphilis, known to the older writers as syphilitic variola and syphilitic varicella, which may be mistaken for true varioloid or true varicella. In these syphilides the eruption may be anatomically identical with the diseases from which they take their names. The scattered spots pass through the stages of papule, vesicle, and pustule, and often present well-marked umbilication; therefore let no one suppose that the appearance of the eruption is in itself *necessarily* sufficient for the purposes of differential diagnosis. It is true that in these cases of syphilis we may often find, after a careful examination, some one spot which has a different appearance from the others, and is unlike varioloid or varicella; it is, however, to the constitutional symptoms and history that we must especially look for the differentiation in doubtful cases. I have nevertheless seen in actual practice, cases of syphilitic variola attended with febrile symptoms, and mistaken by medical men of experience for true variola.[1]

Differential diagnosis of varicella and syphilis.—Syphilitic eruptions resembling varicella may be easily mistaken for true varicella, for here we have not the severe febrile symptoms at the outset of the disease that distinguish varioloid from like forms of dermato-syphilis. Casenave mentions the case of a young girl, sixteen years of age, of healthy constitution, who had complained for a few days of some sense of heat in the throat, with difficulty of swallowing, anorexia, and irregular fever; a number of small eminences now appeared on different parts of the body, and she entered the Hospital of St. Louis. The eruption was at once seen to be vesicular, and pronounced to be chicken-pox. It was the sixth day of the eruption; it covered nearly the whole body, and the vesicles were in different stages, some being nascent, others dried up. Biett having examined the patient discovered a strong resemblance between this eruption and two other cases of syphilitic eruption which he had had occasion to observe before, and his diagnosis was confirmed by the progress of the disease. 'The vesicles were small, resting on a broad base, and surrounded by an areola of vivid copper colour; their progress was slow, and they were unattended by any local symptoms; they gradually faded away and the fluid was absorbed, but in some the contents hardened into a thin scab which adhered for some time. Every one of them, however, left behind a coppery injection of the skin which presented all the characters of a syphilitic blotch.' This patient 'left the hospital in a fortnight. After the expiration of a month she was visited at home, when her body was found covered with true syphilitic pustules.'

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[1] See Syph. Eruptions.

In this and all other similar instances when the case is watched for a few days, a correct diagnosis is easily made; the difficulty is to give a decided opinion after a single examination and in an early stage of the disease.

The following are the chief points which serve to distinguish varicella from syphilitic eruptions resembling it:

Varicella	Varicella-like Syphilide
1. General symptoms of an ordinary febrile attack.	1. Early symptoms of secondary syphilis.
2. Eruption of bright red spots.	2. Eruption of dull red spots.
3. Vesicles begin to get cloudy on the second day, and seldom develop into typical pustules.	3. Vesicles remain transparent for a week or ten days, and then form true pustules.
4. Areola at the base of the vesicles slight, and of a pink colour.	4. Areola at the base of the vesicles dull red, or copper-coloured.
5. Crusts small, light coloured, and easily detached.	5. Crusts dark, thick, and very adherent.
6. Stain left after the eruption very slight, and disappears quickly.	6. A dark stain left on the skin for a long time.
7. Eruptive spots appear simultaneously, or in pretty rapid succession.	7. Eruptive spots appear more slowly and at longer intervals.

Varicella	Varicella-like Syphilide
8. Vesicles always scattered.	8. Vesicles often grouped, and sometimes confluent in patches.
9. Progress of development rapid and regular.	9. Progress of development slow, and often irregular.
10. Eruption lasts about a week or ten days.	10. Eruption lasts two or three weeks, sometimes longer.
11. No other symptoms are present.	11. Other syphilitic symptoms may be present.

RED RASHES OF THE EXANTHEMATA.

Hyperæmia, Roseola, Roseola Variolosa, Roseola Vaccina, &c., Scarlatina, Morbilli, Rötheln.

Rose or red rashes occur as early stages of local inflammation of the skin, and also as symptomatic of various forms of fever and blood-poisoning. Sometimes these rashes are of no pathological importance whatever, while at other times, they may be the forerunners of serious acute disease. In order, therefore, to avoid errors in diagnosis, it is necessary to be aware of the circumstances under which they are most likely to appear. I shall notice briefly some of the more important rose rashes that are met with in everyday practice.

By hyperæmia of the skin is meant an over-distension of the capillaries with blood, giving rise to a pink or red appearance; it is, in fact, a more or less permanent blush, which disappears under the pressure of the finger, to return as soon as that pressure is removed. The swelling of the skin is so slight as to be imperceptible, and the subjective sensations of burning and itching vary according to circumstances, but are usually trifling. It is most unfortunate that the name *erythema* has been, and probably always will be, applied to simple active hyperæmia of the skin.[1] I say unfortunate because it has led to the confounding of symptomatic hyperæmias with the erythemata proper (Erythema multiforme and E. nodosum) which are well-defined skin diseases. If the word erythema must be retained for certain forms of hyperæmia, it should be in some qualified way, so as to avoid the confusion that now arises in the minds of many in consequence of the same word being applied to two distinct things. We might, for example, speak of an active hyperæmia of the skin as an erythematous blush, though even here the term is misleading. Simple hyperæmia of the skin is easily produced by exposure to a cold wind and subsequent toasting before a bright fire; again, the pressure of a garter, band, or truss may give rise to local congestion of the skin, and leave for a time 'a red mark'; the application of a mustard poultice produces a well-known and similar effect more rapidly. All these are examples of what is called *idiopathic* hyperæmia and are simply the result of reflex nervous action. Again, hyperæmia of the skin, quite distinct from an eruption, is a frequent attendant upon many acute febrile diseases and certain disorders of the nervous system; this form of congestion is known as *symptomatic* hyperæmia, to distinguish it from the above-mentioned purely local form.

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[1] The derivation of the word of course justifies its use in this way.

The name *Roseola* is now generally used to signify any red eruption of a fugitive character, and is not confined to that which is symptomatic of one particular disease. Rashes of this kind are not uncommon in children, and are in them generally associated with slight catarrh of the stomach or some other disturbance of the digestive organs. In infants the most trifling derangement of the general health will sometimes produce a rash on the skin, which may consist of a diffuse redness or scattered red patches. These rashes depart almost as suddenly as they appear and leave no trace behind. We can scarcely regard this *Roseola infantilis* as anything definite. A more important and interesting symptomatic roseola, is that which sometimes precedes the typical eruption of small-pox. *Roseola variolosa*, as it is called, is a rash already described, which is occasionally, but rarely, seen at the beginning of the premonitory fever of variola. Its typical seat is the lower half of the abdomen, and inner anterior aspect of both thighs; it generally precedes the true small-pox eruption by one or two days. On its first appearance it has often been mistaken for scarlatina, and has occasionally even led to the erroneous conclusion that the two diseases, small-pox and scarlatina, co-existed. In general, the skin affected with this hyperæmia or red rash remains entirely free from the small-pox eruption. The appearance of this symptom is regarded as an unfavourable sign, especially if it leads to cutaneous hemorrhages, or in other words becomes purpuric. A red rash not unfrequently follows vaccination (*Roseola vaccina*); it lasts a very short time, and disappears without leaving a trace behind.[1]

It is unnecessary to enumerate all the diseases and circumstances under which fugitive rose rashes appear on the body; it is enough to say that they are very common and not generally important, though they are often very puzzling. The following red rashes are noticed here chiefly with reference to their discrimination from scarlatina.

General, diffuse, follicular or papular eczema gives rise first to hyperæmia of the skin, and then to a minute red papular eruption, which at a little distance looks very like scarlatina. It may be distinguished by the following characters. (1) The irritation and itching are far greater than in scarlatina; (2) the eruption is more copious; (3) the tongue is clean or covered with a little white fur; (4) there is no sore-throat; (5) general febrile symptoms are very slight.

General erythema may possibly be mistaken for scarlatina; it is however a rare affection, and a close inspection of the rash will show that it differs from that of scarlatina: it is not so distinctly papular, and there is an absence of the characteristic sore-throat, 'strawberry' tongue, and general symptoms of scarlatina.

Urticaria.—Nothing is easier to recognise than an ordinary case of urticaria, but we occasionally meet with a variety in which the eruption, instead of taking the usual form of distinct wheals, simply consists of a diffuse red rash extending perhaps over the whole body. This kind of urticaria is sometimes produced by eating shell-fish or certain kinds of fruit, and occasionally also by copaiba and some other drugs. *Acute urticaria,*[1] attended with a *diffuse* red rash, and which occurs idiopathically without apparent cause, may be easily mistaken for scarlatina, for it is associated with febrile symptoms, a dry tongue, sore-throat, a quick pulse, thirst, headache, and pains in the limbs. It is best distinguished by attending to the following points. (1) In acute febrile urticaria the onset of the attack is more sudden than in scarlatina, and the febrile symptoms, though present, are not as high as in the latter disease, with a corresponding amount of eruption; this is especially the case with regard to the temperature and pulse. (2) Although there is often a sensation of soreness and marked swelling of the mucous membrane of the throat in acute urticaria, yet it is usually transitory, and not attended with any high degree of inflammation. (3) The typical tongue of scarlatina is never present. (4) The irritability of the skin under stimulation of any kind, and the subjective sensations of itching, stinging, and burning, are far more severe in acute urticaria than in scarlatina. (5) In urticaria the eruption often appears on the face and breaks out on all parts of the body at nearly the same time; in scarlatina, it first appears on the neck, and then on the trunk and limbs.

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[1] For Roseola choleraica see Erythema.

Measles, scarlet fever, and *rötheln* all give rise to hyperæmia of the skin and minute red papular eruptions, and, in spite of all rules, there are some cases of these diseases in which the diagnosis is difficult. The eruption of measles instead of being in patches and mottled, may present a uniform red appearance like scarlatina; when this is the case we must be guided by the prodromic period, the general symptoms, and the prevailing epidemic.

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[1] Urticaria febrilis.

Mild cases of rötheln are easily diagnosed, but severe cases may assume very much the aspect of measles or scarlatina; but as the disease is more markedly epidemic than either of these latter diseases, there are sure to be many other cases in the neighbourhood or in the same house, which assume the ordinary form. On the other hand the extreme mildness of some cases of scarlatina may easily lead to an erroneous diagnosis, and the most experienced men will admit that they have occasionally been deceived. The rule is, where there is any doubt, to act as if the case were one of scarlatina until the contrary is proved. The public as a rule expect an instantaneous and certain diagnosis of all red rashes, and are quite ignorant of the difficulties that may be present to the mind of the medical man.

With reference to this point, the following remarks of Hebra deserve attention: 'The diagnostic signs of scarlatina are these: the existence of a special efflorescence; its mode of distribution over the cutaneous surface; the inflamed state of the parts concerned in deglutition; the peculiar desquamation; the spreading of the disease by contagion; its epidemic occurrence; the febrile symptoms which accompany it; and lastly, the sequelæ to which it gives rise. In some instances, a large number of these characters are present; in others, only one or two of them. In the former case, the recognition of scarlatina is easy; in the latter case it may be very difficult. Indeed it may happen that the contagiousness of the disease is the only proof of its nature, or that we cannot make a diagnosis till we have watched the course of the case for a considerable time, or even till it has passed into the stadium desquamationis.'

RED RASHES.

The following are the distinctive characters of measles, scarlatina, and rötheln:

	Morbilli	Scarlatina.	Rötheln
1. Period of incubation before eruption appears	Fourteen days	Four to six days	Ten to fourteen days
2. Prodromic fever period (between onset of fever and appearance of eruption)	Seventy-two hours	Twenty-four hours	Appearance of rash often the first symptom
3. Rash	(*a.*) Crescentic patches of a dull raspberry red (*b.*) Begins on the face (*c.*) Brightest on the exposed parts	(*a.*) Diffuse bright red, or in large patches (*b.*) Begins on the neck, then chest (*c.*) Brightest on the covered parts	(*a*) At first, patches like measles, subsequently often becoming diffuse like scarlatina (*b.*) Begins on back and chest
4. Period of eruption . .	Very constant, about three days, then begins to fade	Uncertain, but generally rather longer than in measles	About five days
5. Tongue	Tongue furred, and often whitish	Tongue red, with large prominent papillæ, 'strawberry-like,' or covered with a thick yellowish fur in the centre, with bright red prominent papillæ	Tongue slightly furred
6. Throat	Soreness of the throat slight. Dark red irregular spots on soft palate	Inflammation of the throat severe; tonsils enlarged and very painful	Soreness of the throat slight, but generally lasting a long time; tonsils enlarged
7. General symptoms . .	Swelling of the face and eyelids, coryza, photophobia, lachrymation, laryngeal cough, and general catarrh	High fever, hot skin, high temperature and pulse, headache, &c.	Fever generally slight, with or without catarrhal symptoms
8. Desquamation . . .	Eruption followed by very slight branny desquamation	Desquamation copious	Desquamation slight, sometimes more than in measles

RÖTHELN OR GERMAN MEASLES.

Rötheln is generally of so mild a character that it is not commonly seen in the wards of our hospitals; it is therefore all the more important that the attention of students should be directed to it from time to time, when occasion offers, for ignorance of its peculiarities may involve troublesome errors in diagnosis.

The disease was first described by German writers more than half a century ago under the name of 'rubeola,' by which name it is still known in Germany. Unfortunately the same name has been applied in this country to common measles or morbilli, so that we are obliged to introduce a new name such as 'German measles,' 'rötheln' or 'hybrid measles' or 'hybrid scarlatina.' The two latter names are most objectionable, inasmuch as they give colour to the erroneous notion that the disease is a combination of measles and scarlatina. The following cases were admitted under my care in the Middlesex Hospital during a rather severe epidemic of this disease that occurred in 1873.

Jane B., aged 27, admitted June 10, 1873, housemaid. This case was placed under my care by Dr. Harling, who had recognised it as one of German measles. When about eight years old the patient had a sharp attack of measles. On Sunday morning, June 8, at 7 A.M., she had a feeling of nausea, which lasted during the morning, but passed off after dinner. On Monday morning, June 9, about seven o'clock, the same feeling returned, accompanied with headache. At breakfast she found that her throat was sore on swallowing, and also noticed lumbar pains. At about 2 P.M.

she saw that her face was red and a little swollen; then that her neck, back, and chest were flushed in a similar manner. She went to a doctor the same evening, who stated that in his opinion her complaint was measles. On the 10th, she noticed that her legs were affected, being red all over. She felt feverish.

On admission, the whole body of the patient was covered with small patches of a red papular eruption, most marked on the back, where it was more or less confluent. There was slight sore-throat and the fauces were red. The conjunctivæ were somewhat suffused; the tongue was marked by the teeth and of a brownish colour in the centre; the physical signs of the chest were fairly good; the bowels rather confined. The urine contained no albumen.

June 12th.—The rash is beginning to fade and is slight on the hands and feet.

13th.—The tonsils are rather swollen, the left more than the right.—There is a slight trace of albumen in the urine.

14th.—The left tonsil is ragged and painful; the vessels can be distinctly seen running over the posterior surface of the pharynx, which has scattered over it patches of a whitish-yellow colour. The rash is fading but has not quite disappeared, and the temperature is normal. The bowels open freely.

16th.—The urine is acid, 1032, and loaded with urates; no albumen.

17th.—The throat is rather better, and there is no pain, and no rash to be seen.

25th.—The patient was discharged convalescent. The eruption lasted seven days, but never became thoroughly confluent. The patient was under observation for some weeks after her discharge; there was a very slight branny desquamation of cuticle.

Julia F., aged 10, was admitted on June 16. The patient had had measles when a baby, but no other infantile disease. On Saturday, June 14, at 8 P.M., the patient first felt ill and sick, and at 9 P.M. she was sick four times. The following day (15th) at 10 A.M., her father discovered that her face was covered with a rash; sneezing came on about two hours afterwards; there was no headache or lassitude. She had a slight sore-throat on Monday morning the 16th.

On admission the urine was 1010, acid, with a trace of albumen; pulse, 96; temperature, 98·6 F. The whole of the body and limbs were covered with a red patchy eruption, most marked on the face and back, where it was to some small extent confluent. There was a little cough and the fauces were slightly congested. There was lachrymation and sneezing; the tongue was dry and red at the margins.

June 17th.—The rash has faded a little from the face and back, but is increased on the front of the legs and dorsum of the feet. Urine, 1020, acid; no albumen.

18th.—The patient is better, and the sore throat improved.

20th.—Urine, 1020, acid, no albumen. The eruption has disappeared, and there is no more sore-throat.

23rd.—The patient appears quite well. Urine, 1012, acid; no albumen.

27th.—Discharged. The attack lasted nine days; the eruption lasted from five to six days, and never became quite confluent.

A. J., admitted, July 4, 1873. The patient had measles five years ago. She was quite well on July 1. On July 2 she felt low-spirited, and next morning (July 3) found her face and arms covered with a rash; towards evening it covered her whole body.

On admission the patient's face was very much flushed and covered with a measly-looking eruption; this, on examination, was found to extend over all the body, and was very copious over the arms, back, and chest; it was in small spots, which did not coalesce anywhere. She had no running from the eyes or nose, but complained of her throat, which was inflamed; the tongue was very slightly furred;

the bowels were regular. Pulse, 92; temperature, 98·2. There was no coughing or sneezing. The chest was resonant, the breathing vesicular; the heart's area of dulness was normal; there was a systolic murmur heard at the base. 9 P.M., pulse, 92; temperature, 98·2.

July 5th (third day of the eruption).—The rash is less. Pulse, 90. 9 P.M., pulse, 98; temperature, 98·5.

6th.—The tongue is clean; the eruption has nearly disappeared; the throat is better. Pulse, 92; temperature 98·4; the urine, acid; no albumen.

11th.—The patient is quite well.

The whole course of the attack lasted nine days; the eruption lasted five days, and never became quite confluent.

E. J., aged four, admitted, July 8. The patient is sister of the above. On admission the pulse was 160, and the temperature 103·2. The skin felt very hot. The child had a heavy expression of face. The tongue was covered with a white fur, through which the papillæ were seen of a deep red. There was a bright red confluent rash on the chest and back; she had a cough. There was no running from the eyes or nose. The throat was inflamed; there was a slight dulness in front over the left apex, where there were a few moist sounds, also over the left back. Ordered to take two drachms of acetate of ammonia liquor every four hours. 9 P.M., pulse, 160; temperature, 102·6.

July 9th.—Pulse, 144; temperature, 100·3. The patient is better, and the throat less congested. 9 P.M., pulse, 158; temperature, 101·8.

10th.—Pulse, 140; temperature, 100. The pulse is much better, the skin less hot, and the tongue cleaner. No albumen in the urine; the eruption is less. 9 P.M., pulse, 116; temperature, 100·2.

11th.—The child is much better. The tongue is cleaner, but there is still some cough. The attack lasted about eight days; the eruption lasted six days, and was quickly confluent. Discharged well.

Mary F., aged 38, admitted July 12. Has had measles. On admission the pulse was 106; temperature, 100. The face, chest, back especially, and the rest of the body were covered with a bright measly-looking eruption, which over the face was very copious, with a tendency to become confluent; but on the chest, arms, and rest of the body was in distinct spots, with healthy-looking skin between. It was more developed on the chest and upper part of the body than on the legs. She complained of sore throat, which was found to be inflamed. The eruption came out yesterday (July 11), and made its first appearance on the face, extending to the forehead, and then to the neck and chest, &c. The appearance of the eruption was preceded by very little constitutional disturbance. The patient on admission had no cough and no coryza. The tongue was furred, the skin hot, and the appetite bad. 9 P.M., pulse, 100; temperature, 100·6.

July 13th.—The eruption on the face has become confluent, so as to give it a uniform scarlet appearance: on the arms the eruption is more copious, but in spots. The tongue is furred and the throat still sore, the conjunctivæ congested. She perspired freely during the night. Pulse, 92; temperature, 99·8. Urine, 1010; no albumen.

14th.—The eruption is less distinct.

18th.—Discharged, convalescent.

The whole course of the attack lasted about eight days. The eruption lasted five days; at first measly, but becoming confluent on the third day.

The following points are especially worthy of notice:—

1. The premonitory fever in German measles is generally mild, sometimes absent, and resembles in many respects, though not in duration, that of common measles. There is more or less pain in the limbs, slight shivering, sore throat, and often, though by no means always, coryza, redness of the conjunctivæ, and sneezing. All these symptoms were present in some of the cases I have had under

my care. The characteristic features, however, of the premonitory fever, as contrasted with that of measles, is its *duration,* which is seldom much more than twenty-four hours, whereas in measles it is from three to four days; that is, the eruption of the latter disease appears on the fourth or fifth day. Dr. Murchison, speaking of rötheln, remarks that 'Most authors fix the duration of this stage at about three days, the eruption being said to appear on the third or fourth day. In my experience its duration is much shorter, the rash appearing on the second day, or even within the first twenty-four hours.' Dr. Murchison's experience is entirely borne out in this respect by my own and that of many other observers. Indeed, I consider the short duration of the febrile attack before the eruption appears as one of the most constant and distinctive features in which the fever differs from ordinary measles.

2. The character of the eruption, when it first appears, is almost always described as measly; that is, in small reddish patches. In the first instance the rash consists of small rounded collections of minute red papules, which after a time coalesce and form large irregular patches, just as in measles, but with apparently less tendency to become of a horseshoe or crescentic shape. After a time the patches may all unite, and then the skin becomes to the naked eye of a uniform red colour, closely resembling that in scarlet fever. This coalescence of patches was complete in two of the cases under my care; in the other cases the confluence was only partial, the eruption retaining some of its patchy character till it finally faded away. The rash is generally of a rather brighter character than is met with in typical measles. 'The eruption,' says Dr. Murchison, 'is copious in direct ratio to the severity of the general symptoms; it lasts longer, as a rule, than the rash of either measles or scarlet fever—from four to five days. Its disappearance is followed by a desquamation of branny scales.' With regard to the desquamation, I would remark

that it is not generally such a characteristic feature as in scarlet fever; very mild cases of the latter disease frequently desquamate freely; mild cases of German measles, on the other hand, desquamate but little, as in those I have recorded. The protracted duration of the eruption is certainly one of the characteristics of the malady, though no doubt a more or less variable one, and of little or no value as a means of early diagnosis. In the cases under my care in the hospital the eruption lasted from five to seven days —a longer time than is usual in either measles or scarlet fever.

3. Amongst the most constant symptoms of this fever is the persistent, though not generally severe, sore-throat. The tonsils are red and swollen, and remain in that state usually for some days after the rash has faded; indeed, the sore-throat is often the last symptom to disappear. This soreness or feeling of discomfort about the fauces is by no means of the same severe character as that met with in scarlet fever, and very rarely leads to ulceration.

4. Albuminuria is not of frequent occurrence, but it was present for a short time in two of the examples under discussion. It does not always, however, pass away rapidly, as it did in these cases; it may become chronic, or even lead in rare instances to acute dropsy. This in fact constitutes the chief and almost the only grave feature of the disease, but as it very rarely occurs, a favourable prognosis may be given.

5. The disease propagates itself, and never leads to the production of either scarlet fever or measles in others. The seed, as a gardener would say, comes up true. This is a fact of great importance, and almost conclusive against its being either a mild form of morbilli or scarlatina, or even a combination of the two.

6. German measles affords no protection from either of its allied diseases, nor does scarlet fever or measles protect in the slightest degree from attacks of rötheln. This fact,

if admitted—and it is undoubtedly true—is the strongest possible evidence that the disease is distinct from all others, however its superficial appearance may lead us to believe that it is some modified form or so-called hybrid of scarlet fever and morbilli. All my patients, with one exception, had previously had measles. My own opinion is, that rötheln is more distinctly epidemic, at least in this country, than even ordinary measles, and certainly more so than scarlatina; and further, that it is probably less contagious than either of those diseases, though on this point I should be very unwilling to dogmatise; several convalescent children were in constant communication with the cases in my wards, but not one of these children contracted the malady; moreover, several cases that I have had under my care in private practice have failed to communicate the malady to others; this is, however, the exception, not the rule. Lastly, it is important to remember that epidemics of rötheln vary very much in severity.

In conclusion, I would remark that German measles until quite lately was not fully recognised by the profession in this country; little or no account is given of it in our ordinary text-books on medicine, and its name does not find a place in the 'Nomenclature of Diseases' drawn up by a committee of the Royal College of Physicians. Under these circumstances it is not surprising that errors of diagnosis should sometimes bring discredit on our profession. For example, a medical man is called in to a case of German measles in its early eruptive stage; he is not particular to enquire about the symptoms or the duration of the premonitory fever, and he at once pronounces it *measles.* Perhaps this would be of little importance if the case remained under his care, but unfortunately he is sent for into the country, and in the meantime the character of the rash of the patient has changed to a uniform red eruption, and is pronounced by some other medical man to be *mild scarlatina.* In the course of ten days, probably, the patient is well, and it is then evident that the case is one neither of measles nor scarlatina, but of rötheln. In order to avoid mistakes of this kind, the greatest possible care should be taken in the first instance, for the public are not very tolerant of mistakes in diagnosis, even though the medical man may be blameless.

I have little to add to the above description, first published in the 'Lancet' of 1874, except that enlargement of the glands of the neck, especially under the jaw and behind the sterno-mastoid, is very common; and that the disease is very contagious.

SUB-CLASS II.—NON-INFECTIOUS INFLAMMATIONS HAVING AN INDEFINITE COURSE.

GROUP 1.—ERYTHEMATOUS GROUP.

Erythema—Roseola—Hydroa—Erysipelas—Urticaria.

ERYTHEMATOUS INFLAMMATION.

ERYTHEMATOUS inflammation of the skin is characterised by hyperæmia which disappears under pressure, and swelling which is due to serous exudation and the migration of a large number of leucocytes into the cutis and subcutaneous tissue; the skin, though red and swollen, retains a *smooth, unbroken surface.* The inflammation is attended with little constitutional disturbance; and pain, itching and tension, though often present, do not form prominent features. Erythematous inflammation runs an acute course and spreads after the manner of erysipelas, that is, at the circumference of the patch. The serous exudation is rapidly absorbed, and the leucocytes probably undergo disintegration; all that remains in the course of a day or two is perhaps a very slight pigmentation and a little branny desquamation. It will be seen from this description that erythematous is closely allied to erysipelatous inflammation, but differs from it in severity, and in the fact that the former never leads to deep-seated suppuration or the formation of sloughs. The infiltration and consequent tension of the skin is moreover much more severe in erysipelas.

The following are the chief points which distinguish erythematous inflammation: (1) Its superficial character. (2) Its tendency to invade new tissue, but not to return to that previously affected, in which respect it contrasts remarkably with eczema. (3) Its liability to attack symmetrical parts of the body. (4) The marked tendency there is to slight cutaneous hemorrhage in the course of the inflammatory process. (5) The very slight constitutional disturbance.

POLYMORPHIC ERYTHEMA.

Leaving the subject of erythematous inflammation in general, we pass on to the consideration of particular forms. There is a pretty well defined group of diseases known as polymorphic erythema, and having as its most characteristic feature an erythematous inflammation of the skin, the varied appearance of which fully justifies the epithet, polymorphic. To the different forms of eruption met with in this group, the following names are commonly applied: *Erythema papulatum*, *E. tuberculatum*, *E. annulare*, *E. iris*, *E. gyratum*, and *E. nodosum*. All these, with the exception of the last, are included by Hebra under the name *Erythema multiforme*, and he remarks that they 'are merely forms of the same disease in different stages, the appearance varying according as the affection is undergoing development, or is in a later period of its course, or subsiding.' That these Erythemata are essentially varieties of the same disease there can be little doubt, but Hebra's statement that they are simply 'different stages' is apt to mislead, if it be understood that the affection *generally* goes through all these different stages. This is far from being the case. *Erythema papulatum* often remains *Erythema papulatum* from the beginning to the end of its course. *Erythema gyratum* may, without changing its form, pursue a long and eccentric course, always invading new tissue, until it has passed over in succession nearly the whole of the body. That the serpentine lines are in the first instance produced by the union of segments of coalescing circles, or in other words, that *Erythema gyratum* is often an advanced stage of *E. annulare*, I do not doubt; I wish only to guard against the supposition that an ordinary case of *Erythema papulatum* generally passes through the different forms of *E. tuberculatum*, *E. annulare*, and *E. gyratum*. *Erythema* *nodosum* is usually regarded as a distinct species, and typical cases of this affection would lead us to that conclusion; but the fact that *Erythema nodosum* is occasionally mixed with *E. papulatum* and *E. tuberculatum* points to a very close relation between the three varieties. It will be more convenient, however, to discuss *E. nodosum* separately.

Erythema papulatum is the most common variety of Erythema multiforme, but it passes insensibly into *Erythema tuberculatum,* the only distinction being that in the latter affection the spots attain a larger size, and the constitutional symptoms are more severe. *Erythema tuberculatum* is, however, always combined with *E. papulatum,* so that the two diseases must be regarded as identical, differing only in severity. *Erythema papulatum* is characterised by an eruption of raised, somewhat flattened spots, which vary in size from a pin's head to a fourpenny piece or larger. They are of an irregularly rounded form, with a well-defined margin, and at first of a red colour, but soon assume a violet hue, especially in the centre. In the course of a few days they subside, leaving behind red and slightly pigmented desquamating spots, which disappear altogether in a few weeks. The pigmentation is probably partly the result of hemorrhage into the papules. As the old spots die out, fresh ones appear, and thus the disease becomes as it were, chronic. On the fingers the spots often closely resemble chilblains. The eruption is usually, though not always, attended with a little tingling and itching.[1] One of its most characteristic features is its constant occurrence on certain parts of the body, especially on the dorsal aspects of the hands and feet, and not uncommonly on the forearm and leg, while the trunk and face are rarely affected, and in these cases the eruption is always present also on the hands. The *symmetry* of the parts affected is another distinctive character of this disease. A case of unilateral *Erythema papulatum* is, I believe, quite unknown.

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[1] Similar changes occasionally occur on the mucous membrane of the mouth and tongue, and we often find patients complaining of soreness in these regions, though little change can be seen.

There is a difference of opinion amongst observers as to the relative frequency of this affection amongst males and females. Hebra regards it as 'more common in the male than in the female sex.' The late Mr. Naylor says, on the contrary, 'it is much more common in women than in men.' In its ordinary form I have certainly seen more cases amongst men than women, but I should lay no stress on this point. All agree that it is chiefly an affection of the young, especially the young adult. It has a marked tendency to relapse and recur, and is therefore very apt to become chronic; the eruption may even last for many months, disappearing for a time, and then reappearing with a fresh crop of papules. In some individuals it returns with great regularity every spring. Occasionally the disease is distinctly epidemic. Lastly, it is only the more severe cases which are attended with constitutional disturbance, which usually takes the form of slight febrile symptoms, with pains in the limbs and joints, and general lassitude. The chief diagnostic marks are: (1) *Locality*; in most cases the eruption is found on the back of the hands. (2) *Symmetry*; unilateral cases are unknown. (3) The absence of constant, severe itching distinguishes it from prurigo. (4) The peculiar violet tint of the eruption. (5) Its marked tendency to recur. (6) Constitutional disturbance is usually very slight. (7) Lymphatics are often inflamed. It is, perhaps, more commonly confounded with similar syphilitic eruptions than with any other disease, but may be distinguished from them by the slight constitutional disturbance, the absence of all distinctive syphilitic symptoms, and by the presence of more or less itching, secondary syphilitic eruptions of this kind being very seldom irritable.

Erythema annulare and *iris.*—The ringed and gyrate forms of Erythema are much less common than *Erythema papulatum*, indeed they are rather rare affections. The ringed variety usually begins with the development of round, flat, slightly raised disks. These gradually become depressed in the centre, while they spread at their margin, which is raised and thick, and sometimes translucent; the spot at this stage is very like a wheal in appearance; sometimes an imperfect vesicle and scab form in the central part of each wheal-like spot, at other times the skin gradually assumes a normal colour and character, leaving, however, a red and slightly raised ring of centrifugally spreading erythema (*E. annulare* or *centrifugum*). Sometimes in the centre of each tubercle changes occur, the result of inflammation, which are of a more permanent character, and require a considerable time for their resolution; then we have a central spot with a ring or series of concentric rings of inflammation around; this peculiar variety is called *Erythema iris.*

The gyrate forms are usually produced in the way already indicated, by the intersection of several circles of *Erythema annulare*; when these become very large, they of course lose their circular form, and are converted simply into curved and intersecting lines, hence the name *Erythema gyratum.* The peculiar tendency to attack new tissues which belongs to this whole group of Erythemata is particularly well seen in this variety, which may gradually sweep over a large extent of skin, leaving no trace behind.

Erythema nodosum, though closely allied to the other erythemata, is regarded by most writers as a distinct and independent malady. It is certainly not, as some have supposed, 'a more marked stage' of *Erythema tuberculatum,* for it generally begins and ends as *Erythema nodosum.* The outbreak of this affection is almost always preceded by slight febrile disturbance, pains in the limbs, and general lassitude. This is followed by the appearance of rosy patches on the front of the leg, which soon become raised and tumid, the degree of swelling depending on the severity of the inflammation. These cutaneous nodes vary from half an inch to two or three inches in diameter, they are usually of rounded or oval form, with their long axes in the direction of the limb. They undergo a series of very characteristic changes. At first they are rosy, then red with a slight shade of yellow, then purple or livid, and subsequently they fade into a greenish yellow, and gradually disappear altogether; they, in fact, go through all the changes of an ordinary bruise, and for the same reason, namely, the presence of cutaneous hemorrhage. Hence the name *Dermatitis contusiformis* which is sometimes applied to them. In ordinary mild cases they are confined to eight or ten spots situated between the knee and ankle, and almost invariably present on *both legs*. Sometimes similar spots appear on other parts of the body, especially on the forearms, but under these circumstances they are generally also present on the legs. The spots are painful and tender to the touch, but are unattended with itching, and very rarely suppurate. The duration of the disease as a whole, is uncertain, but each node goes through a regular series of changes, and only lasts a few weeks. The first crop of eruption may, however, be followed by a second, and this again by a third, so that the malady may be greatly prolonged, but the usual duration is about a month or six weeks. The disease is more frequent in females than in males, and is most common between the ages of fifteen and thirty. Hebra regárds the constitutional symptoms as directly due to the skin inflammation, and in proportion to the extent of tissue involved. This, however, admits of doubt, for it often happens that the constitutional symptoms appear before the eruption, and are relieved as soon as this is developed, and in other cases the general symptoms are well marked, though the eruption may be very slight.

There can be no doubt whatever that the severer forms of erythema, especially *Erythema nodosum*, are often attended with pain, and sometimes, though more rarely, with swelling of the joints, exactly resembling those of acute rheumatism. So constantly are these pains present that Trousseau remarks:[1] 'The articular pains which precede and accompany the eruption seem to me to be characteristic of *Erythema nodosum.* The general symptoms consist in a universal feeling of discomfort, in lassitude and aching of the legs, headache, loss of appetite and a loaded state of the digestive canal, and in fever more or less severe during a prodromic period, which varies in duration from one to five days. When once the eruption is accomplished, recovery generally takes place in one, two, or three weeks; but again I repeat that the duration of the malady may be much more protracted, and that, so long as the general symptoms continue, new eruptions may be looked for.' And again: 'The pain is sometimes as acute as in pure rheumatism, but I have never seen redness or swelling in the situation of the affected joints, nor have I ever found signs of cardiac lesion. The existence of these articular pains seems to indicate that *Erythema nodosum* is of the nature of rheumatism.' It is not necessary to give further quotations on this subject. The point which still requires to be determined is this: Are the articular pains, which all admit are often present, simply part of the disease, or must they be regarded as those of ordinary rheumatism, and the eruption of erythema as merely a complication? For my own part, I have no doubt they are constitutional symptoms that properly belong to *E. nodosum.* Whether they may be rightly called rheumatism it will be difficult to say, until we have a more exact knowledge of the true nature of that disease.

The morbid anatomy of *Erythema nodosum* is somewhat obscure. It has long been known that the superficial lymphatics of the part affected often become inflamed, indeed the nodes are sometimes arranged along the course of these vessels. Köln believes each node to be produced by capillary embolisms; but if this be true, we are still as far as ever from knowing the pathological conditions which give rise to so curious a phenomenon as *numerous symmetrical embolisms.*

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[1] Trousseau, *Clinical Medicine* (Syd. Soc.), vol. ii. p. 242.

Differential diagnosis of *Erythema nodosum* is not difficult; indeed the affection is not likely to be mistaken for any other disease, except possibly syphilis, and the foregoing description is quite sufficient to ensure a correct diagnosis. Its distinctive characters may be briefly recapitulated:

(1) Locality; front of the leg between the knee and ankle.

(2) Symmetry; always present on both legs.

(3) The nodes do not itch, but are painful, and very tender on pressure.

(4) They can be both seen and felt to be raised above the surrounding skin.

(5) They go through the same changes of colour as an ordinary bruise, for which they might easily be mistaken, if it were not for their symmetry and multiple character, which readily serves to distinguish them.

(6) There is often inflammation of the lymphatics of the part.

(7) Constitutional symptoms of lassitude and pains in the limbs are often present, but there are no other symptoms that could be mistaken for those of syphilis.

What strikes one particularly with regard to the polymorphic erythemata is their frequent occurrence in the course of other and more serious diseases, and also the apparent predisposition which exists in the rheumatic constitution to these affections, and especially to *Erythema nodosum.*

The following are some of the principal diseases in the course of which erythemata are not uncommonly met with:—cholera, pellagra, acrodynia, advanced phthisis, and septicæmia. With reference to the cholera rash, Dr. Hilton Fagge remarks (Hebra, vol. i. p. 288, note): 'The rash which breaks out in epidemic cholera is, indeed, generally regarded as a roseola, and described as *Roseola choleraica*, but, in my opinion, it would be more correctly termed an *Erythema papulatum.* In the cholera epidemics which have occurred in Vienna I have observed it in about one per cent. of the cases, and chiefly in those that terminated favourably. It generally made its appearance quite at the end of the disease, when the choleraic symptoms had subsided, and during the secondary fever. It occupied the backs of the hands and feet, and also the fore-arms and legs, and it had rather a bluish red or livid colour. It generally survived the proper choleraic symptoms, not passing into any other form of erythema (such as the *E. annulare*, *E. iris*, or *E. gyratum*), but remaining as an *E. papulatum*, sometimes even for a fortnight.' This view is confirmed by Hebra, who mentions that in the cholera epidemic of 1866 the eruption occurred in about the same proportion of cases. During the same epidemic, nine cases of '*Roseola choleraica*' occurred at the London Hospital (Lond. Hosp. Reports, vol. iii.), while 'only twice' was urticaria noticed. Mr. Mackenzie, in his report on these cases, says that the rash makes its appearance 'between the seventh and tenth day after the first symptoms of cholera; it lasts three days generally, but may exceed this.' He also says: 'As the rash fades, the skin on prominent parts of the body begins to desquamate; in this respect it is very similar to the desquamation of scarlatina.' Whether we regard this *Roseola choleraica* as a variety of erythema or a roseola (whatever that may mean) is not of much importance; it is certainly closely allied to the erythemata.

The erythema of pellagra and acrodynia must be regarded as a part of the disease rather than as an accidental complication. In pellagra an erythematous eruption is present in the great majority of cases. It is attended with sensations of burning and itching, and is followed by considerable deposit of cutaneous pigment which is more or less permanent. Acrodynia, or '*Erythema epidemicum*,' was epidemic in Paris in 1828. It was described by Alibert as attended with an eruption of painful red and swollen spots, especially on the feet, hands, legs, and arms; this was followed by pigmentation and desquamation of cuticle. There were also other peculiar pigmentary changes and marked nervous symptoms, all of which closely allied the disease to pellagra, of which it was probably an unusual epidemic, and due to the use of diseased grain as food.

Treatment.—There is little to be said with regard to the treatment of the ordinary forms of erythema. In severe cases of *Erythema nodosum* constant rest in bed is necessary, but it is only under exceptional circumstances that this is required. Tonics, more especially cinchona and quinine, are beneficial in shortening the attack, but as a rule medicine does not appear to exercise any very definite influence on the malady. When the attack is associated with sharp febrile symptoms and severe rheumatismal pains, I have found distinct benefit from salicylate of soda. The disease should under these circumstances be treated like acute rheumatism. In severe cases the legs should be wrapped in cotton wool and kept for the most part in a raised position. In some forms of creeping erythema the application of a solution of nitrate of silver will arrest the progress of the inflammation; the same plan of local treatment is even more advantageously applied to the superficial creeping varieties of erysipelatous inflammation of the skin. The best plan is to apply a solution of fifteen grains of nitrate of silver in an ounce of spirits of nitrous ether with a brush to the whole patch, carrying it well over to the healthy skin beyond. The effect of this treatment in stopping the progress of superficial erysipelas is very remarkable, but it has little effect on the more deep-seated and serious forms in which the whole system is profoundly affected.

REFERENCE TO PLATES.

Erythema papulatum. Fox's Atlas,[1] plate 2; Cazenave's Atlas,[2] plate 2 (good).

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[1] Fox's edition of Willan & Bateman. Churchill, 1875.

[2] Cazenave's *Atlas.* Paris, 1856.

Erythema tuberculatum. Fox's Atlas, plate 2.

Erythema circinatum. Syd. Soc.'s Atlas, plate 24 (severe case, good plate); Fox's Atlas, plate 1.

Erythema iris (*Herpes iris*). Fox's Atlas, plate 28.

Erythema nodosum. Syd. Soc.'s Atlas, plate 21; Fox's Atlas, plate 3; Cazenave's Atlas, plate 3. (Syd. Soc.'s plate is very good, and the best of the three.)

HYDROA.

Under the name Hydroa, M. Bazin distinguishes an affection which he says is analogous to the phlyctœnode herpes of Willan, and characterised by the appearance of discrete vesicles or small blebs which are commonly arranged in scattered groups. The disease is connected with arthritis, and may last for several months. He describes three varieties: (1) Vesicular hydroa; (2) Vacciniform hydroa: (3) Bullous hydroa (like pemphigus with small bullæ).

I shall point out further on the close relationship which exists between vesicular hydroa and polymorphic erythema. Bullous hydroa, on the other hand, is not to be distinguished from the pemphigus pruriginosus of writers. In the neurosis described by Erasmus Wilson as 'neurotic excoriations,' a tingling sensation is felt in the part, and when the patient attempts to relieve the irritation by rubbing, the cuticle is detached, leaving an excoriation. Sometimes, but rarely, a blister is developed. This affection, which is apt to be mistaken for a feigned disease, is allied to bullous hydroa.

Symptoms.—1. Vesicular hydroa is an affection which Bazin says has generally been confounded with *Erythema papulatum*. It is developed both on the cutaneous and mucous integuments; and is especially met with on the dorsum of the hands and wrists, on the anterior aspect of the knees, and in many cases on the buccal mucous membrane. In the mouth, the eruption occupies by preference the lower lip and the internal surface of the cheek, and in one recorded instance the base of the uvula was surrounded by a circle of vesicles. The conjunctivæ may also be the seat of these eruptions. The affection is sometimes preceded by a feeling of discomfort, anorexia, and slight feverishness; but these premonitory signs may be wanting, or be so little marked that the attention of the patient is only attracted by the appearance of vesicles. The eruption first developes on the backs of the hands and knees, and as a rule, it does not show itself on the buccal mucous membrane till the third or fourth day.

Whatever the locality of the eruption may be, it presents the following characters; one perceives first of all dark red spots, small, round, a little raised, and with clearly defined edges. The size of these spots varies from that of a lentil to that of a threepenny-piece; they are sometimes surrounded by a rose-coloured areola; there soon appears in the centre a small vesicle full of a yellow transparent liquid. This vesicle, which developes the day after the appearance of the red patch, dries rapidly in the centre, where a small dark crust is formed, while the liquid is reabsorbed at the circumference. These phenomena are accomplished on the second or third day of the eruption. At this stage the affection assumes a peculiar aspect, one sees small red discs, supporting in their centre a blackish crust and surrounded by a whitish border, slightly raised; this border is formed by macerated epidermis, which remains flaccid after the partial reabsorption of the liquid contained in the vesicle; at the end of some days the coloration disappears, the central crust falls, leaving a violet spot, which is slowly effaced. Occasionally the affection follows a different course; first a small round and transparent vesicle is perceived, round the vesicle a red areola shows itself, which extends little by little from the centre to the circumference, so as to form a small spot, slightly raised, like those above noticed. The subsequent phenomena follow the usual course; the liquid at the circumference of the vesicle is reabsorbed, while that which occupies the central part is transformed into a brownish crust. *Lastly*, it may happen, especially in cold weather, that the fluid in the vesicle is quickly reabsorbed; from that time there would only be a small yellowish or whitish spot, placed in the centre of a red disc, and formed by the detached epidermis; it is in this case that the affection may be confounded with *Erythema papulatum*. On the mucous membranes the vesicles are whitish and surrounded by a violet areola, and the crusts become detached sooner than they do on the skin. The red and vesicular discs are more or less numerous, they are usually separated by healthy skin; sometimes they are arranged in groups of two or three, the circumferences of which touch each other. They do not all appear simultaneously, but by successive crops, during several days. There is but little itching, and the febrile symptoms which occasionally exist at the beginning, cease from the time the eruption is developed.

In some cases the affection shows itself successively on the knees and the backs of the hands, then on the buccal mucous membrane, and especially on the inner surface of the lower lip.

The usual duration of vesicular hydroa is three or four weeks; each eruptive element taken by itself, accomplishes its evolution in four or five days, and the affection is prolonged for several weeks only by the occurrence of successive crops. Relapses are not uncommon.

Hydroa shows itself in both sexes, but more often in men than in women. It is developed in adults about the age of from 20 to 30. It is most frequent in spring and autumn; cold and variations of temperature have a marked influence upon its appearance and its course. Lastly, this affection has always shown itself in subjects who have presented, or who still present *symptoms of arthritis.*

Differential Diagnosis.—It is easy to recognise vesicular hydroa by the characters above mentioned. Nevertheless this affection has been, and may again be, confounded with papular *erythema* and *herpes*. In papular erythema one sometimes observes a vesicle on the top of some of the red spots which constitute the eruption; but the vesicle is only an accessory feature and it does not present the *evolution* of the hydroa vesicle.

Herpes is characterised by vesicles grouped on an inflamed base. In hydroa, each vesicle rests upon a small violet-coloured patch and is perfectly distinct. Hydroa is an essentially arthritic affection, at least it is always met with in arthritic subjects, and it constantly presents an evident connection with arthritis.

Second variety.—Hydroa vacciniforme, Bazin remarks, is not known to authors. When he first observed this singular eruption, he sent a patient suffering from it to consult several doctors at the Paris hospitals; some thought it was a syphilitic affection, others did not pronounce on the nature of the eruption. The affection lasted more than a year, and had been treated unsuccessfully by the most varied remedies. He at last advised the patient to go to the waters of Bourbonne, which had formerly relieved him of a rheumatic attack; the eruption, which had rebelled against all treatment up to that time, very soon showed signs of amelioration, and subsequently entirely disappeared.

Symptoms.—Hydroa vacciniforme begins with some feeling of discomfort and anorexia; the eruption shows itself first on uncovered surfaces, then on other parts of the body, the buccal mucous membrane is also invaded by it. First, one sees red spots, on which soon appear transparent vesicles resembling those seen in herpes. On the second day, these vesicles, which are round, present a very evident *umbilication*; in a short time they form a crust successively on the centre and the circumference of the vesicle. When this crust falls off, it leaves a depressed cicatrix. In one patient the numerous cicatrices which covered the surface of the body would have led to a belief in a former attack of small-pox. The affection is prolonged by successive crops for months.

Third variety.—Bullous hydroa is an arthritic affection which is little known. The eruption shows itself on the arm, trunk, the inside of the thighs, and sometimes on the buccal mucous membrane. It is preceded by discomfort, loss of appetite and slight feverishness. The general symptoms soon cease and often mislead. The only premonitory symptom which is constant is an *intense pruritus.* The eruption shows itself in the form of small bullæ which present one important character, namely, the inequality of their size, some being of the size of a lentil, and the largest rather larger than a pea. These bullæ are round, arranged in an irregular manner in groups of three or four; they are filled with a transparent liquid, which soon becomes turbid and assumes a yellow colour; lastly, they are situated on a red surface, which extends at their base in the form of an areola. While new bullæ are developed, the old ones dry up and are replaced by a yellow crust; if one of them is torn by scratching, one finds a violet-coloured and slightly excoriated surface. In the intervals between the crops, one does not observe any morbid phenomena, except the *pruritus,* which is usually very marked. The invalid keeps his appetite, and nutrition is not altered. Bullous hydroa runs a chronic course; it shows itself by successive crops, and lasts, usually, from five to six months. M. Bazin remarks that in one of his patients the eruption was associated with that of red pruriginous papules. The disease is more common in men than women. It shows itself in adults of from 20 to 40 years of age. The seasons and variations of temperature have a marked influence on the development of bullous hydroa; it is in the spring that it has been most often noticed. Like the other varieties of hydroa it is associated with the arthritic diathesis.

Diagnosis.—The characters of bullous hydroa enable us always to recognise it. It must not be confounded with pemphigus; it is important to establish clearly the differential diagnosis of these two affections, which have not the same origin, and which, above all, are not equally serious. In bullous hydroa the bullæ are small, and do not exceed the size of a pea; they are also remarkable for the inequality of their size; they occupy tolerably circumscribed regions. The bullæ of pemphigus are much larger; they may attain the size of a nut or even of a hen's egg; they exist in a variety of regions, and sometimes extend over a large part of the skin. Lastly, bullous hydroa ends by cure after a duration of four to six months; in pemphigus the majority of cases end fatally.

The foregoing description of hydroa is taken from M. Bazin's account of the disease; it will be seen that he strongly insists on well-marked distinctions between vesicular hydroa and *Erythema papulatum* (with vesicles), and he lays especial stress on the fact that in erythema the presence of vesicles is only an occasional and accidental symptom, but that in hydroa it is an essential part of the disease, and that the *evolution* of the vesicles is different in the two maladies. But when we investigate his cases of hydroa and the symptoms he describes as proper to that disease, we are struck by the fact that they correspond very closely with those which belong to certain forms of erythema. The following characters of vesicular hydroa will serve to show its close relation to *Erythema multiforme*:—(1) The attack is often preceded by slight febrile disturbance. (2) The disease runs a course varying from a fortnight to six months. (3) It is especially apt to recur. (4) The eruption attacks symmetrical parts of the body, (5) and is especially common on the backs of the hands and about the knees; it is also very frequent on the mucous membranes of the lower lip and cheek. (6) More or less pain or inflammation about the joints is commonly present. (7) The eruption in typical cases consists of small, well-defined, slightly raised, roundish patches of erythema, with a central vesicle or small bleb. (8) The disease is more common in young adults than in children, and in males than in females.

All the above-mentioned characters are more or less common to hydroa and polymorphic erythema. In all forms of erythema we occasionally meet with vesicles and blebs; in *Erythema iris* they are common, and even in *Erythema papulatum* and *nodosum* they are exceptionally met with. Referring to *Erythema papulatum* Hebra says: 'In some cases there appear simultaneously with these forms of erythema, eruptions which are of a similar kind, excepting that they are vesicular. These were, consequently, classed by Willan under the name of Herpes. It is, however, impossible to doubt that the *Herpes iris* and the *Herpes circinatus* arise from the same causes as *Erythema iris* and *Erythema annulare,* and differ only in the fact that in the first two affections, vesicles running an acute course are developed, which are associated in groups, and surround a common centre. All the other characters are the same in the two groups of diseases, and the opinion long since expressed by Rayer that *Erythema iris* and *Herpes iris* are mere modifications of one affection is doubtless correct.'

Taking all these points into consideration, we can hardly avoid the conclusion that the *vesicular hydroa* of Bazin and the *Herpes iris* of Willan are both closely allied to polymorphic erythema. The question of retaining distinct and separate names is not a matter of much importance so long as we know that we have *allied,* I do not say *identical,* diseases to deal with.

Bazin's bullous hydroa is hardly to be distinguished from the *Herpes gestationis* of some writers.

Reference to Plates.

Hydroa. Fox's Atlas, plate 72.

URTICARIA.

Syn. *Nettlerash.*

Definition.—Urticaria may be defined as an acute noncontagious affection of the skin, characterised by the development of wheals, and accompanied by sensations of stinging, itching, and burning, like those produced by the sting of a nettle.

Nettlerash is remarkable for its variable and fugitive character, and for the great variety of circumstances and conditions under which it is developed. In all cases, however, the presence of wheals or some equivalent eruption is pathognomonic of the disease. The size, form, and general appearance of the wheals vary greatly; sometimes they are no larger than a split pea, while at other times they may occupy a considerable extent of surface and cause much swelling of the skin. In typical examples they are round, raised, and circumscribed spots, with a white centre and a reddish border, closely resembling the eruption produced by a nettle sting. In other cases they may take the form of streaks, ovals, or irregularly shaped raised patches; sometimes the only eruption consists of a diffuse erythematous-looking bright red blush; but, whatever be its form, it is very evanescent, and liable to appear and disappear almost suddenly, leaving no trace behind. In all cases the subjective phenomena are nearly the same, and consist in excessive itching, tingling, stinging, and burning sensations; sometimes the itching preponderates; at other times perhaps the stinging or burning sensations are the most marked, for, like the eruption itself, they are subject to constant changes. The rash often appears with a sudden outburst all over the body, while at other times it is developed more slowly, and appears successively on different parts. The subjective sensations invariably cause the sufferer to scratch and rub the skin; this greatly aggravates the symptoms, and brings out fresh wheals wherever the finger nails are applied, and in severe cases small excoriations and little spots of coagulated blood may be seen scattered about the skin as the result of scratching. The eruption is roughly symmetrical, and may appear on any part of the body, but is most common on the trunk, face, and upper extremity. An ordinary attack of urticaria may last from a few hours to several days, but always with partial remissions and exacerbations; it is usually associated with very slight febrile disturbance. It must not be forgotten that the mucous membrane sometimes participates in the changes which occur in the skin; this is especially the case about the fauces and throat, which become suddenly swollen, so as even to threaten suffocation.

The circumstances under which urticaria is most likely to occur require a brief notice, as having some bearing on diagnosis. (1) It is extremely apt to complicate other irritable affections of the skin, such as scabies, phthiriasis, prurigo and eczema; this is especially the case in children, who are more liable than adults to this affection; the production of nettlerash under these circumstances is due to a reflex nervous action set up by scratching. (2) Urticaria produced by the irritation of some part of the mucous tract is not uncommon, and belongs also to the group of reflex nervous actions. We often meet with examples of this kind dependent on uterine irritation from pregnancy and other causes; also in children who suffer from worms. (3) The bites and stings of poisonous insects and the hairs of stinging plants will produce in some people pretty severe local attacks of urticaria, so that the face or arms become much swollen and very painful. (4) Certain kinds of food are apt to produce nettlerash; amongst these may be specially mentioned shell fish, mushrooms, and many kinds of fruit; but in these cases much depends on the idiosyncrasy of the individual. (5) There is a form of recurrent urticaria which is distinctly and wholly a nervous affection; it occurs in people whose nervous system has been overtaxed, and is commonly associated with neuralgic affections; often it comes on with great regularity at a certain fixed time in the day, and sometimes it replaces an attack of neuralgia at the usual hour. I have met with several cases of this kind in which, if the neuralgia did not appear, the urticaria did, and *vice versâ*, the two never appearing together. (6) Certain drugs are apt to give rise to red rashes, which must be regarded as closely allied to urticaria; among the best known of these are copaiba, capsicum, turpentine, and cubebs.

Differential diagnosis of urticaria.—We must be prepared to meet, from time to time, with considerable variations from the ordinary types of urticaria. These variations may be due to its complicating other eruptions, or to deviations from its ordinary course. One of the commonest of these is called *Urticaria papulosa*; it differs in no essential feature from *Lichen urticatus*, and consists in the sudden development of a small papule surrounded by a little wheal, and attended by all the subjective sensations of nettlerash; the wheal quickly subsides, but the papule being scratched and rubbed often remains for several days. This affection is almost confined to children, and causes great annoyance on account of the irritation it produces, especially at night. Little cutaneous hemorrhages are sometimes associated with nettlerash, and hence the name *Purpura urticans.* Occasionally the serous exudation which occurs in urticaria is more superficial and copious than usual, so as to produce a raising of the cuticle in the form of vesicles or blebs; the fluid having once distended the outer epidermis, is not very quickly reabsorbed, and we then have an inflammation which has been called *Urticaria vesiculosa* or *bullosa.* This affection must of course be distinguished from pemphigus accompanied by urticaria, which is altogether a different disease.

Acute febrile urticaria is an idiopathic affection but rarely met with. It is ushered in with pretty severe febrile symptoms, especially headache and sickness. The pulse and temperature may both be high and the tongue furred, but the characteristic feature is the suddenness of the attack, and the general outburst of a red rash, which may cover the whole of the trunk, face and limbs, and produce much swelling of the skin. It is always attended with intense burning, stinging and itching sensations. The eruption may last for several days, but during that time there are always intervals of partial remission. After the acute symptoms have passed away, a milder form of recurrent urticaria may still remain for an indefinite period. I have already referred to the differential diagnosis of this affection and scarlatina, under the head of red rashes.

Urticaria sometimes takes the form of simple, roundish, red patches, which bear a very close resemblauce to *Erythema papulatum*, or *iris*. To distinguish the one from the other we must bear in mind, (1) that erythema attacks certain parts of the skin, such as the backs of the hands, fore arms, and legs, while urticaria is most common on the trunk. (2) That urticaria is always attended with severe itching and irritation, which is not the case with erythema. (3) The very sudden appearance of the eruption is a point characteristic of nettlerash.

When urticaria attacks the face, it sometimes produces much œdema and swelling, especially of the eyelids and lips, so much so that it may easily be mistaken for erysipelas; the skin, though very puffy, is not, however, as tense and red as in erysipelas, and the constitutional symptoms, especially the state of the temperature and pulse, will, of course, be different.

The differential diagnosis of the exanthemata and urticaria will be found under the head Red Rashes.

URTICARIA PIGMENTOSA.

Urticaria pigmentosa is a peculiar and rare form of *persistent* urticaria, associated with *buff-coloured pigmentation* of the skin. Cases of this disease have been brought before the Clinical Society of London by Mr. M. Baker and Dr. Barlow,[1] and more recently by Dr. Sangster, who has suggested the name I have adopted, '*Urticaria pigmentosa.*' This affection has hitherto been met with only in children, and consists in a chronic form of urticaria, attended in its early stages with excessive pruritus; the eruption appears as raised wheals or tubercles, and red measly-looking patches mixed with yellowish pigment spots resembling *Pityriasis versicolor*; the peculiarity in the colour and the persistence of these spots constitute one of the chief characteristics of this rare variety of urticaria. Usually, after the disease has lasted for some time, the more active neurotic symptoms subside, leaving simply slightly raised patches of yellowish skin, but the more acute symptoms may be reproduced by rubbing and scratching. I have often met with persistent yellowish pigment spots produced by chronic urticaria, and other more or less permanent changes in the skin due to the same cause are not unknown; therefore the pigmentation and persistency of the eruption in *Urticaria pigmentosa* must not be regarded as conclusive evidence against the true urticarial nature of this affection.

Etiology and treatment.—In dealing with urticaria, we must always bear in mind that the affection is a symptom rather than a disease, and that it is of the first importance to ascertain its exciting cause. I have already indicated six of the principal causes of urticaria; these may for convenience be divided into two groups, (1) those that are simply reflex and depend for the most part on local irritation of the nerves of the skin or of the alimentary canal, and (2) those that arise from internal disturbance and are due chiefly to defective processes of digestion and assimilation, or the direct action of some poison. In this latter, as well as in the former group, the nervous system plays a very important though obscure part; the division is therefore only adopted for the purpose of indicating the different modes of treatment required in the two classes.

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[1] *Clinical Society's Transactions*, vols. viii. and x.

The first point, then, in any given case is to ascertain whether there is any definite local cause of irritation giving rise to the urticaria; and with this view the skin should be carefully examined for scabies, eczema, bug bites, pediculi or other common exciting cause of the kind. It should not be forgotten that the dye or dressing of the under clothes will sometimes act as a local irritant to the skin. Having found that the eruption depends on some external cause, the only treatment necessary is of course to remove it, but it should be remembered that urticaria, when once excited, does not always disappear directly the cause of it is removed; a little patience is often required, and soothing remedies should be applied. If we fail to find any external cause of irritation, our attention should next be directed to the alimentary canal or the uterine apparatus. Worms in children are not an infrequent cause of urticaria, and I would remark in passing that round worms may be quickly got rid of by a few doses of santonine, and that obstinate cases of thread worms are best treated by the internal administration of sulphur or Friedrichshall water, and the application of a mercurial ointment to the anus every night, which prevents irritation in that region; the latter part of the treatment is most important, as the malady is perpetuated by the child scratching the anus during sleep and then transferring the eggs to its mouth; the disease is in fact kept up by auto-inoculation. Fruit and green vegetables should be avoided, as supplying the food most favourable to the development of thread worms.

Recurrent or chronic urticaria of the second group is undoubtedly often associated with a weak digestion and mal-assimilation of food; in its treatment, therefore, our attention should be especially directed to a suitable diet

As a rule, fruit, vegetables, pastry and sugar should be avoided, together with any other food that seems to produce indigestion; the sufferer should, in fact, adopt the simplest form of a plain and nutritious diet, such as milk, meat (once cooked), toast or bread, light puddings and cocoa. Wine, beer, coffee and most other stimulants should be avoided, but in some cases a little weak brandy and water may be required, and is the form of stimulant which is generally the most suitable. No rules as to diet can be laid down which are applicable to all cases, it is only possible to indicate the general plan of dietetic treatment; the idiosyncrasy of the individual must, of course, be studied. For example, with some people milk always disagrees, and it would be the height of folly under these circumstances to insist on a milk diet with a view to improve a weak digestion. The condition of the teeth and the proper mastication of food, regular and suitable exercise, and a sufficient amount of rest, are all points that demand attention. With regard to medicines, those are most useful that promote the processes of digestion, correct an excessive secretion of acid, and prevent an unhealthy decomposition of the food. By far the most generally useful is a mixture containing bismuth, carbonate of magnesia, bicarbonate of soda, and small doses of nux vomica taken before each meal. Sometimes small doses of Fowler's solution with alkalies do great good, chiefly by improving the powers of digestion. Nux vomica and carbolic acid pills are occasionally useful.

A large proportion of the cases of urticaria are distinctly of neurotic origin, indicated by other disturbances of the nervous system. This especially applies to that form which recurs at a fixed hour in the day, and which sometimes replaces an attack of neuralgia. Quinine and arsenic are both useful in dealing with urticaria of this kind, but thorough change of air is of all remedies the one which is most certainly beneficial. The malady is, however, often very obstinate.

Acute urticaria of the ordinary kind is generally produced by poisoning from shell fish, fungi, or some other poisonous food. Under these circumstances it is often associated with vomiting and diarrhœa, which relieve the more serious symptoms. The best treatment in these cases is free purging and a simple emetic, if the latter can be administered soon enough to remove any of the offending matter from the stomach; this treatment is particularly applicable to children, who usually bear emetics well.

Acute febrile urticaria is a rare affection, and occurs without any assignable cause except perhaps some severe shock to the nervous system; it should be treated by rest in bed, a light unstimulating diet, mild saline purgatives, followed by tonics, especially quinine. As the suffering is very considerable, soothing external treatment must be adopted; warm alkaline or bran baths, and alkaline and sedative lotions are the most useful. Very severe symptoms sometimes occur in consequence of the sudden swelling of the mucous membrane of the throat; when this happens, a sharp quickly acting purgative is always indicated.

Lichen urticatus, which is a form of urticaria, almost confined to children, is a most troublesome affection to deal with. In many cases it does not in any way yield to treatment; the affection, however, usually dies out in a few years. The most generally useful medicine, I find, is carbonate of magnesia and soda with a little bromide of potassium; the bowels should be kept open and the diet carefully regulated: soothing lotions should be applied to the skin, and amongst the many that have been tried, one containing bicarbonate of soda (10) and hydrocyanic acid is perhaps the best. Weak alkaline warm baths are also suitable; after the bath, a little vaseline or some soothing ointment should be rubbed on the skin; but do what we will, these cases are very trying, alike for doctor, patient, and relations.

REFERENCE TO PLATES.

Urticaria. Fox's Atlas, plate 4; Cazenave's Atlas, plates 4 and 5.

Urticaria pigmentosa. See Mr. Baker's case, 'Clin. Soc. Trans.,' vol. viii. page 52.

GROUP 2.—HERPETIC GROUP.

Herpes—Herpes Gestationis—Cheiro-Pompholyx—Pemphigus.

HERPES.

Herpes zoster and *Catarrhal Herpes* are two well recognised species of herpetic inflammation, which resemble each other in the character of their efflorescence, but differ in their pathological relations. The eruption, in both, is an acute inflammation, running a short and typical course, and characterised by the development of rather large vesicles on a highly inflamed patch of skin or mucous membrane. The peculiarity of these vesicles is, that they form closely packed clusters and have little tendency to burst.

CATARRHAL HERPES.

Syn. *Herpes febrilis, Herpes facialis, Herpes labialis, Herpes progenitalis.*

Symptoms.—It will be most convenient to discuss Catarrhal herpes under its two common forms, *Herpes facialis* and *Herpes progenitalis.* The former is met with chiefly about the lips, alæ of the nose, external ear, and less frequently on the cheek. Its appearance on the lips is so often associated with catarrh, pneumonia, ague, or other febrile disturbance, that it has acquired the name of *Symptomatic Herpes.* The eruption, though most common on the face, is not always confined to that region. For example, it may appear on the buccal mucous membrane or on the soft palate and uvula, where it assumes a somewhat peculiar appearance, for the delicacy of the epithelial covering of those regions allows the vesicles to burst readily, so that only small red excoriated spots or superficial ulcers are left. On the face, the diagnosis of herpes is very easy, but on the uvula it may possibly be mistaken for the commencement of diphtheritic inflammation, and on the inside of the mouth and tongue it may easily be confounded with aphthæ.

Herpes progenitalis is observed most commonly on the prepuce, but occasionally on the glans and dorsum of the penis; it is also met with about the labia in the female. The affection differs in no essential from *Herpes facialis*; the eruption is preceded by slight sensations of burning or pain; which are quickly followed by the appearance of small clusters of vesicles; these in a few days dry up and form crusts, which soon fall off, leaving the skin red, but otherwise healthy. If, however, the vesicles are much scratched, they will break and form an excoriated surface. The differential diagnosis of *Herpes progenitalis* is often difficult, for under certain conditions it may be easily mistaken for syphilis. When the herpes is much irritated by rubbing and accumulated secretion, a sore is formed with a yellowish purulent discharge which can scarcely be distinguished from a specific ulcer; this is especially apt to occur when the prepuce is contracted, and the diagnosis may be made still more difficult by the enlargement of the inguinal glands, or a hardening of the tissues about the herpetic sore. Under these circumstances, a correct diagnosis can only be made by treating the case for a short time, or by inoculation. The sores of herpes will quickly disappear under simple treatment such as frequent washing, the separation of the parts by lint, and the use of a mild astringent lotion. Syphilitic ulcers, on the other hand, do not heal so readily, and moreover leave a cicatrix.

Although catarrhal herpes is a common attendant on febrile affections, it is by no means confined to them. Sometimes it appears without any assignable cause, and at other times its development is clearly traceable to local nerve irritation, as, for example, the passage of a catheter. I have seen it produced, almost suddenly, by the application of a strong galvanic constant current; and my friend, Mr. Erasmus Wilson, tells me he has seen it alternate on the face with urticaria; when one appeared the other disappeared, and *vice versâ*. All these peculiarities point to the fact that the production of catarrhal herpes, like zoster, is closely connected with a disturbance of the nervous system. Catarrhal herpes usually causes little pain, and is very liable to recur; in these respects it contrasts remarkably with zoster.

HERPES ZOSTER.

Syn. *Zona, Shingles.*

Symptoms.—Zoster is an inflammation of the skin, directly produced by nervous influence. The attack is ushered in by a sharp or burning pain along the course of some nerve, often one of the intercostals; this neuralgia may last for twenty-four hours or more without the slightest sign of any cutaneous inflammation, but sooner or later patches of red skin appear over the seat of the pain, and small red points arranged in groups quickly develop; a little later, each point is crowned by a clear vesicle, and as these vesicles increase in size they form very compact clusters. When fully developed we see groups of large opaque vesicles, some almost confluent, arranged on vividly red patches of skin, and following roughly the course of some nerve or its branches. The vesicles do not usually burst, but their contents become converted into pus, and they ultimately dry up and scab, sometimes leaving behind small troublesome ulcers and deep-seated scars.

The whole course of an attack of zoster is remarkably definite: it never lasts more than a week or ten days, never relapses, and seldom recurs. It is, however, liable to abort. On looking at any patch of the eruption, we see that there is a very unequal development of the vesicles; the outlying ones do not pass beyond the stage of small red pimples, while the central ones are large opaque swellings full of fluid. Now what happens normally to the outlying members of a group, happens exceptionally to a whole cluster or series of clusters, and thus we have an *abortive zoster*. In this case there may be some difficulty in the diagnosis of the disease, but to be aware of the fact is sufficient to put us on our guard against an erroneous diagnosis.

There are some peculiarities about *Herpes zoster* that require a brief notice. (1) The disease is equally common at all ages, but the neuralgia that often follows it is by no means so. In young people, as soon as the sores left by the eruption have healed, the patient is well and no trace of the disease is left, except perhaps a few scars and a little tenderness of the skin: but in elderly people this is not generally the case; with them, the severe and obstinate neuralgia that follows an attack of zoster is the most troublesome feature of the complaint, and may last for many months. (2) Although zoster may occur along the course of almost any of the sensory nerves, yet it has a marked preference, if I may use the expression, for certain regions. For example, it is more common in connection with the intercostal, lumbar, and supraorbital than with any other nerves in the body: indeed *Zoster brachialis* and *Z. femoralis* are often confined to the branches of the intercostal and lumbar nerves which run down the arm and upper part of the thigh respectively. On the forearm and hand it is but rarely seen, and never on the leg and foot. When the upper division of the fifth nerve is affected the eye may suffer. The affection is equally common on either side of the body, but so rarely does it occur on both sides at the same time, that it has acquired the name of *Unilateral Herpes*, so that the superstition prevailing amongst the ignorant, that shingles which meets round the body always proves fatal, is not likely to be often practically refuted. I have seen a case in which a spiral ring of (non-syphilitic) zoster encircled the trunk, so that the ends overlapped, but never one in which the two ends exactly joined. Zoster of the trunk, though always unsymmetrical, often passes beyond the middle line both in front and behind. (3) As a rule, shingles does not occur twice in the same individual, but this rule is not without many exceptions. I have on several occasions met with it a second time in the same individual, and on the whole I am inclined to think that the rarity of its recurrence has been rather overestimated. It is difficult to believe that one attack of what appears to be a local nervous affection can afford any protection against another, and yet, that is the generally accepted conclusion.

Differential diagnosis.—The following are the chief points of distinction between catarrhal herpes and zoster:

(1) Catarrhal herpes has an especial tendency to attack certain junction points of skin and mucous membrane. Zoster has no such tendency, but is developed for the most part in connection with the dorsal and lumbar nerves.

(2) Zoster is definitely and exclusively a neurotic affection. Catarrhal herpes, on the other hand, is commonly, though not always symptomatic of general febrile disturbance.

(3) Zoster usually occurs only once in an individual. Catarrhal herpes, on the contrary, is remarkably recurrent.

(4) Zoster is strikingly unilateral; catarrhal herpes often bilateral.

(5) Zoster is often associated with severe neuralgic pains, which is not the case with catarrhal herpes.

It occasionally happens that zoster is attended with the development of pemphigus-like blebs instead of vesicles, and sometimes hemorrhage occurs into the vesicles; these are, however, exceptional features, and not likely to complicate the diagnosis; it is only necessary to be aware of the facts. There is a rare form of syphilitic eruption which on its first appearance so closely resembles zoster as to render the diagnosis very difficult; the syphilide is, however, usually bilateral or irregularly symmetrical. This fact should at once suggest a very careful examination in bilateral cases for other signs of syphilis. Zoster runs a much more rapid course than the syphilitic eruption which resembles it, so that a few days of observation will serve to determine the nature of a doubtful case. At a very early stage before the eruption has appeared, zoster is often mistaken for pleurodynia, or commencing pleurisy.

Treatment.—*Herpes labialis* usually requires no treatment except a little simple ointment; sometimes, however, it is very troublesome on account of its persistent recurrence, and in this case a little of the strong nitrate of mercury ointment of the Pharmacopœia will sometimes check its development, if applied on the first indication of its appearance.

Herpes zoster requires very simple treatment; the point to be especially remembered is not to irritate the eruption. A soothing ointment or some oxide of zinc and starch powder is all that is required, care being at the same time taken that the eruption is not aggravated by friction, which is best accomplished by covering the part with cotton wool. There are two important features of *Herpes zoster*: (1) it often leaves deep and indelible scars; this is of little importance on the trunk, but may be a very serious disfigurement on the face. Patients should *invariably* be told of the possibility of this accident before any remedies are applied, otherwise the medical attendant may have the credit of producing the scars by his treatment. (2) Zoster is not infrequently followed by severe and obstinate neuralgia; this seldom occurs in a severe form in young people, but is very common in the middle-aged and old, in whom it is often most difficult to remove. It is best treated by large doses of quinine, port wine, and the subcutaneous injection of morphia; sometimes croton-chloral gives relief, and the free local application of belladonna may be also tried with advantage.

REFERENCE TO PLATES.

Herpes zoster. Syd. Soc.'s Atlas, plates 8 and 23 (good); Fox's Atlas, plates 26 and 27; Cazenave's Atlas, plate 8; Hebra's Atlas, Heft 6.

HERPES GESTATIONIS.

This rare affection of the skin has been described under different names by several writers. It may be briefly defined as a disease of neurotic origin, occurring in pregnant or parturient women, and characterised by an eruption of small bullæ accompanied by excessive pruritus. It is probable that Hebra refers to this or a similar disease when he says: 'The existence of a real *Pemphigus hystericus* is proved by the occurrence of this eruption as a constant accompaniment of pregnancy, and by its disappearance (in such cases) within a short time after delivery.' Chausit, Hardy, and Erasmus Wilson have described cases of this disease, the two former under the name of *Pemphigus pruriginosus*, and the latter under that of *Herpes circinatus bullosus.* In Chausit's case the pruritus was excessive during the last four months of pregnancy, but the eruption of blebs did not appear until the fifth day after delivery; six weeks later the whole of the eruption had disappeared. Within the last few years Mr. Milton and Mr. D. Bulkley, of New York, have called especial attention to the same affection under the name *Herpes gestationis*, and the latter has collected from different sources records of nine cases to illustrate the characteristic features of the disease, which may be briefly stated as follows:—

(1) The affection occurs in pregnant or parturient women.

(2) The eruption consists of solid papules and small bullæ of unequal size, for the most part as large as a split pea, but occasionally attaining the size of a filbert or larger.

(3) The blebs have a tendency to appear in clusters, and are most abundant on the extremities, especially the forearm and hand, and about the legs.

(4) The eruption is attended by intense pruritus, which often precedes the development of the bullæ, and lasts for some time after they have disappeared.

(5) The eruption leaves dark purplish and brown pigment spots on the skin.

(6) The disease does not usually disappear immediately after delivery, but gradually subsides in a month or six weeks. There is often a relapse or fresh outbreak of the eruption on or about the third day after parturition.

(7) The constitutional symptoms are usually slight, and are probably in part due to disturbed rest from the pruritus. Aching in the limbs and neuralgic pains are, however, common.

A patient suffering from this disease was about two years ago under my care at the Middlesex Hospital; her history is briefly as follows: She is thirty-seven years of age, and perfectly healthy. During the latter months of her recent pregnancy she suffered from intense pruritus and some neuralgic pains in the limbs, but from no rash on the skin. On the third day after delivery a copious eruption of scattered solid papules and discrete vesicles appeared; the latter quickly developed into blebs of various sizes, the majority being about as large as split peas, but some attained the diameter of a shilling, and a few were as large as a florin; they appeared chiefly on the arms, hands, and legs, and especially about the knees, while a moderate number were scattered over the rest of the body. The bullæ had a tendency to form groups, but were all discrete, the skin in the neighbourhood being more or less covered with scattered solid papules as large as good-sized shot; the itching was intense, far more severe indeed than in an ordinary case of eczema, and there was some aching pain in the limbs and joints. The outbreak of the eruption was acute and almost sudden, subsiding gradually, so that at the end of three weeks it had greatly diminished. A relapse then occurred, with a fresh outbreak (not so severe as the first attack) of bullæ on the arms and legs, but not on the trunk; the pruritus was intolerable, and prevented all sleep at night. The eruption subsided as before, and seven weeks after delivery she was free from all symptoms except some itching and considerable dark discolouration of the skin, which had been the seat of the eruption. Throughout the attack she nursed her baby, which was perfectly healthy.

The appearance of the eruption in this case was quite peculiar, and the mixture of hard, solid papules with blebs of various sizes was very characteristic. The skin was quite free from eczematous excoriations.

The only point in which this case differs from similar ones recorded by others, is the fact that the eruption did not develop until *after* delivery, and in this respect it resembles Chausit's case, in which the eruption of blebs first appeared on the fifth day after parturition; but the intense pruritus which existed during the later months of pregnancy in both his case and the one I have above described, points to a cutaneous neurosis, although no eruption was then visible. Since the above account was written, two years ago, the same woman has been twice under my care with similar but less severe attacks, and in neither instance was she pregnant. This fact indicates that pregnancy is not essential.

I regard the disease as very closely allied to, if not identical with, Bazin's *bullous hydroa*, and I prefer the name *Hydroa gestationis* to *Herpes gestationis*.

REFERENCE TO PLATES.

Pemphigus pruriginosus. Fox's Atlas, plate 29.

CHEIRO-POMPHOLYX.

There are, probably, few dermatologists who have failed to notice, from time to time, a disease which Mr. Hutchinson has described as cheiro-pompholyx. Judging from the few well-marked cases of this affection that I have seen, I should regard the following as its chief distinctive features: (1) The symmetry of the parts attacked by the eruption; (2) its occurrence chiefly on the hands and feet; (3) the absence for the most part of other signs of inflammation beyond the development of vesicles (often deeply seated) or small blebs; (4) the peculiar condition of the nails; (5) its strikingly recurrent character. These features may not be found in every case, but they are certainly generally present. I have never been able to discover that this affection originated in the sweat ducts or glands, as some have believed; but further observation will probably determine with more certainty than at present to what group of skin affections cheiro-pompholyx should be assigned.

A short time ago a well-marked instance of this disease came under my care. The subject of it was a lad in good health, the son of a medical man living in the country, who had for a long time noticed the affection in his son as something out of the common, and sent him to me for a second opinion. The recurrent character of the disease was well illustrated, for my patient had suffered from repeated attacks. It was in his case confined to the hands, and consisted of vesicles arranged singly or in small groups along the sides and backs of the fingers. The contents of the vesicles was quite clear, and there was no other sign of inflammation in their immediate neighbourhood, or on any other part of the body; there was, in fact, nothing resembling ordinary eczema. I should probably never have seen this case had it not been for the peculiar condition of the nails, which caused my patient annoyance, and which were undermined and broken near the root.

Dr. Robinson, of New York, gives the following account of a typical case of cheiro-pompholyx in a man who came under his observation. He says: 'The eruption had lasted about three weeks when I first saw him. It had commenced on the palms of the hands near the wrist, and spread over the entire palms, and between the sides and on the palmar surfaces of the fingers. When I saw him the majority were seated between the fingers. The eruption has changed but little in its mode of appearance and in its course since I first saw him. An outbreak is always preceded by a tingling, burning sensation in the parts, and the patient is more than usually depressed and nervous. The eruption appears as small, clear vesicles, deeply placed in the skin. They may be single, or collected in groups of two, four, or more. Very frequently the vesicles forming a group are all of the same age and size. The eruption was always symmetrical, and I have often observed that exactly corresponding parts of the hands or feet become affected at the same time. If but a single vesicle existed, it almost invariably dried up. When there was an aggregation of vesicles they were at first isolated, but afterwards frequently united and formed a bulla; if then the liquid was absorbed, the skin covering them became very hard and dry. I stated that the vesicles appeared to contain a perfectly clear liquid, but this afterwards generally became more or less opaque, though scarcely ever yellowish in colour. This latter occurred only when large bullæ were formed and the liquid slowly absorbed, i.e., in other words, it was observed only when the bullæ were of several days' standing, and, as will be seen afterwards, was owing to the number of pus cells present in the liquid. This really made the vesicles look like sago grains imbedded in the skin. The vesicles gradually became larger and raised. Isolated vesicles in the palms of the hands seldom became raised above the level of the skin previous to absorption. Where they appeared in groups, they always became raised above the general surface, as also most of the isolated vesicles between the fingers. They were never pointed, but always had a more or less flattened top. After the absorption of the contents, or rupture of the vesicles or bullæ, a reddened surface (on account of the thinness of the epidermis) was left behind. At no time was there a cracked or discharging surface, or any appearance resembling that of eczema in that region. Occasionally the eruptions spread peripherically, especially in the palms of the hands. There has been no change in the appearance of the vesicles since I first saw him; but at present the disease is not so severe, the eruption consisting principally of isolated vesicles and but very few bullæ. Occasionally, however, an 'outbreak' occurs lasting two or three days. Then the eruption presents more of the character it had in an earlier period of the disease. The feet are also affected, but only in a slight degree, a group of vesicles appearing occasionally here and there. Their appearance is always preceded by a tingling in the part. They appear symmetrically, and often on exactly corresponding parts. There has never been any accompanying eruption on the other parts of the body.'

Differential diagnosis.—Cheiro-pompholyx must not be confounded with the affection known as 'dysidrosis,' or, as I regard it, *local hyperidrosis*, consisting in an excessive secretion of perspiration, which, in consequence of its profusion and the congestion of the skin which necessarily attends such an excessive secretion, does not entirely escape through the sweat ducts, but leads to a general maceration of the cuticle and to secondary eczema. With regard to the 'sago grain' appearance of vesicles, which is by some considered characteristic of cheiro-pompholyx and by others of 'dysidrosis,' I would remark that it occurs under any circumstances where a deep-seated vesicle is formed under thick and more or less transparent cuticle, such as that of the palmar surface of the hand or fingers, and is *not characteristic of any one disease.*

REFERENCE TO PLATES.

Cheiro-pompholyx. 'Illustrations of Clinical Surgery,' J. Hutchinson (1876), plate 10. This is, as Mr. Hutchinson says, 'an exaggerated example.'

PEMPHIGUS.

Syn. *Pompholyx.*

Definition.—Pemphigus may be defined as a disease characterised by the successive development of bullæ. It generally runs a protracted course and leaves on the skin dark purplish stains, but does not scar.

There are two well-marked species of this disease, to which the names *pemphigus vulgaris* and *pemphigus foliaceus* are respectively applied.

Symptoms.—I. Pemphigus vulgaris is, as the name implies, the ordinary form of the malady, but though common as compared with P. foliaceus, it is nevertheless a rare disease. The constitutional severity of this affection appears to depend chiefly on its duration, and on the extent of skin involved, and few diseases present greater variations in these respects. Indeed it is commonly said that no two cases of pemphigus are alike. In typical examples the eruption consists of bullæ which are at first small, but increase rapidly in size until they attain the diameter of a florin or even a crown-piece, and form large hemispherical blisters with tense walls; if they become confluent their characteristic shape is lost, while their size is, of course, greatly increased. The albuminous fluid contained in these blebs is at first clear, but soon becomes opaque and turbid with flakes of lymph. In some cases the blebs burst readily, producing excoriated surfaces ; in others they dry up without rupture, leaving behind a piece of shrivelled white cuticle with a newly-formed epidermic layer underneath. Wherever a bleb has existed, a dark purplish pigment stain is left, which often lasts for a considerable time. The number of blebs developed at any one time is usually small, but successive crops appear and prolong the complaint for many weeks, months, or even years. This recurrence of successive crops of bullæ is one of the characteristic features of the disease. Under these circumstances the patient presents a very remarkable appearance, the skin being more or less covered with blebs in different stages of development, excoriated patches, thin laminated crusts and purplish stains. The bullæ sometimes occur quite irregularly on different parts of the body, at other times they are collected in groups, and occasionally beginning as it were from a centre, spread centrifugally over a considerable extent of surface, leaving behind a large pigmented patch of skin around which fresh bullæ are successively developed. When the disease is on the wane we notice a general dryness of skin, and the cuticle often exfoliates even where no bullæ have existed. In universal pemphigus the palms and soles generally escape, but their epidermis is shed nevertheless. As I have already said, when the number of blebs is small, the disease is of a mild type and the constitutional symptoms slight. There is, however, a severe variety which is remarkable for the number and size of the bullæ, and as they follow each other in rapid succession the patient's health is undermined. This variety is often attended with intense itching, so that the sufferer is unable to resist the temptation to scratch himself; this leads to the premature rupture of the blebs and the formation of large excoriated surfaces, which tend to mask, and at the same time to aggravate, the original disease; under these circumstances, the patient's health and strength are gradually worn out, and the disease ends fatally. Happily, cases of this kind are rare.

There are many variations in the course of pemphigus vulgaris which it would be impossible to describe. I shall however, notice one or two of the more interesting. As a rule, the bullæ are confined to the skin, but they are sometimes found on the mucous membrane of the mouth, throat, and the vagina, and in the latter situation may possibly give rise to a serious error of diagnosis. In general, the appearance of blebs on the mucous tract is associated with their presence on the skin, which thus serves as a guide to their true nature, but in those rare instances in which the bullæ are confined to the mucous membranes, the diagnosis is difficult, because they rupture before they are fully formed, and nothing is seen but excoriated surfaces, and shreds of white membrane. In some cases of pemphigus we meet with red patches of inflamed skin, the central portion of which is alone raised in the form of a bleb, so that a wide areola is formed, and here and there red spots may be seen on which no perceptible elevation of cuticle occurs; these peculiarities are, however, exceptional. Cases of this kind may be regarded as occupying a position in some respects intermediate between pemphigus vulgaris and pemphigus foliaceus.

Hemorrhagic pemphigus cannot be regarded as a variety of the disease; it is due simply to a little accidental bleeding into the bullæ, so that their contents become mixed with blood; this gives the disease a more formidable appearance in the eyes of the laity, but is in itself of little importance.

Occasionally we meet with solitary pemphigus as it is called (P. solitarius). It is a purely local affection, and generally runs a rather acute course. It is met with, for the most part, on the hand or foot, where the blister developes rapidly and sometimes attains a very large size. I have seen it occupying a great portion of the hand and extending up the fingers.

There is a variety of bullous eruption described by the late Mr. Naylor as 'pompholyx diutinus in children'; he says: 'The first sign is usually an eruption of several minute red spots on the surface, generally on the abdomen and thighs, and afterwards on any part of the body. In the course of a day or two, each becomes the seat of a small vesicle, not larger than a pin's head and contains a clear fluid; it is surrounded with a narrow red margin, and unless care be taken in the search, is very likely to be overlooked. The vesicles enlarge rapidly, and to such a degree as to attain, many of them, the diameter of a hazelnut in the space of twenty-four hours or less. It not unfrequently happens, that long ere the vesicle has reached this size, it bursts, but the red patch on which it was evolved still spreads, and in a circular direction; in this manner it may attain one and a half inches or more in diameter. Further changes now ensue. The bleb may either shrivel or dry up in two or three days and leave no trace except a slightly rough and red spot, which at first sight might be mistaken for psoriasis; or it assumes a dark and somewhat wrinkled condition, adherent to the skin, and surrounded by a red margin, and like in character to ecthyma, save in the thinness of its crust; or the border will show a narrow and raised rim, the remains of the bleb. These different conditions may very frequently be observed at one and the same time on various parts of the body. The general health is unaffected, and often remarkably good. The local irritation is not severe, and only experienced at night.' I think it is open to doubt whether this affection can be regarded as a true pemphigus; it is more probably a form of Hydroa.

II. *Pemphigus foliaceus* was first described by Cazenave. It is a rare and severe disease of very chronic nature. In this species, the bullæ, instead of being tense, as in ordinary pemphigus, are flaccid and flattened; they contain a little opaque serous fluid which scarcely raises the cuticle, and quickly dries into thin yellowish crusts. The eruptions succeed each other with such rapidity that the new epidermis has not time to harden, and consequently, instead of the formation of new blebs, we have a secretion of fluid which dries into crusts or scales, and which Cazenave compares to flaky pie-crust. Under these circumstances the disease gives rise to a most disagreeable and sickening smell. In an earlier stage, before the crusts are formed, the skin is more vascular than in common pemphigus, and has been compared by Hebra to the appearance produced by a superficial scald. At a later period of its course, it closely resembles an eczema. The disease is attended with severe constitutional symptoms, and the prognosis is unfavourable.

Diagnosis of pemphigus.—It is hardly necessary to point out that there are many diseases of the skin besides pemphigus in which bullæ are developed; but there is this important difference—that whereas in pemphigus they are the typical form of eruption, in other diseases they are only accidental, and associated with other symptoms which at once render the diagnosis easy. The following are the principal diseases in which blebs are occasionally seen: Scabies, eczema, erysipelas, erythema, hydroa, urticaria, varicella, elephantiasis græcorum, and dermato-syphilis, in all of which bullæ are more or less frequent. Moreover, it should be remembered that in some individuals blebs are very easily produced by pressure or friction. For example, everyone is familiar with their production by walking or rowing. In those who are in a weak state of health they may occur from very slight causes, as from intertrigo, or from lying long in one position in bed. It is well to bear these facts in mind when considering the occasional development of bullæ in any of the above-named diseases.

It seems at first sight improbable that scabies should be mistaken for pemphigus, and yet this is not very uncommon. I have myself met with several instances in which this mistake occurred. In some individuals with very sensitive skins, the irritation of the acari instead of producing the usual eruption, gives rise to a copious development of blebs as large as a sixpence; this is more likely to occur in children than adults. It is only necessary to make a careful examination in these cases, and the true nature of the disease at once becomes apparent. In eczema we sometimes meet with a few scattered blebs, but they are little likely to be mistaken for pemphigus; a much more possible mistake is to confound chronic pemphigus foliaceus, which has denuded a large surface of skin and more or less covered it with crusts, with severe eczema rubrum; but in this case, the constitutional symptoms—such as weakness, emaciation, diarrhœa—from which the patient is sure to suffer in pemphigus will serve as a guide to diagnosis; the peculiar pigmentation and the absence of infiltration in pemphigus will further help to distinguish it from eczema.

In erysipelas the appearance of blebs is very common, but they take a different form from those of pemphigus, and the character of the inflammation is altogether so distinct that it is unnecessary to dwell upon the differential diagnosis. In the peculiar forms of erythema known as hydroa and herpes iris, we have small central blebs surrounded by rings of erythematous inflammation, but the small size of the bullæ, the symmetrical character of the eruption, its common occurrence on the arms, hands, and feet, together with the presence of erythematous spots, and the absence of severe constitutional symptoms make the diagnosis easy.

I have on several occasions met with cases of urticaria in which blebs have been developed on some of the wheals; and when one recollects the way in which these wheals are produced, it is not surprising that vesicles and blebs should sometimes appear. It is hardly necessary to say that this accidental occurrence of bullæ bears no relation whatever to pemphigus. With regard to elephantiasis græcorum, the development of bullæ at a certain stage of the disease cannot be regarded as a mere accidental phenomenon, but rather as a natural part of the malady. It is not necessary, however, to do more than simply to refer to the fact.

Syphilis has long been recognised as a cause of certain bullous eruptions, as, for example, the so-called pemphigus neonatorum, which is of this nature. Although in a lax way we speak of these eruptions as syphilitic pemphigus, yet such a mode of expression should always be avoided, because it implies a certain relationship between syphilis and true pemphigus which does not exist. Bullous dermato-syphilis is rare in adults but not uncommon in infants, and is said to be frequently met with in foundling and lying-in hospitals. Sometimes it attacks the soles and palms, at other times the skin of the whole body is affected. This form of bullous eruption may be distinguished from pemphigus by the presence of other signs of congenital syphilis, and by the character of the crusts, which are thick and hard in syphilis, and quite unlike those of pemphigus. Moreover, there is almost always some ulceration in this kind of dermato-syphilis. It may be stated broadly that a bullous eruption in a newly-born infant is almost always of syphilitic origin.

Treatment.—Subacute pemphigus is always associated with febrile symptoms and other constitutional disturbance; therefore most of the general rules that apply to the treatment of fever are applicable; but especially is it essential that the patient be kept in bed, and be fed regularly and often. The pain of pemphigus is considerable, and the nervous system is profoundly affected; there is also, with the fever, more or less constitutional depression. Under these circumstances, a moderate amount of alcohol is almost always required. In an early stage, when there is much fever, quinine should be given, to be followed, as the fever subsides, by full doses of arsenic. One of the most important points in the treatment of this affection, is the judicious use of sedatives, *particularly opium.* As I have already said, the nervous system especially suffers; the patient gets little or no rest, and consequently soon becomes exhausted; under these conditions opium is most useful, and I have regularly employed it with the most beneficial results in all the severe cases that have come under my care; indeed, apart from its immediate beneficial influence on the nervous system, I believe it has a direct curative effect on the disease. The great value of this drug is a point that I do not find sufficiently indicated by writers on this subject. In the later stages of the disease, arsenic is our chief remedy. The local treatment of subacute pemphigus should always be of as soothing a nature as possible, dressing with linimentum calcis to which a very little carbolic acid has been added answers well; a weak lotion of carbolic acid and water is also a suitable application. The free use of medicated cotton wool, so as to protect and give a soft covering to the skin, is always indicated. In short, the local treatment is much what we should adopt in dealing with a superficial burn. If any of the sores remain obstinate and will not heal, the best plan is to paint them with a solution of nitrate of silver (gr. x. ad ℥j). In a later stage of the disease, drying powders, especially lycopodium, are most serviceable.

Chronic pemphigus is admitted to be one of the most inveterate and intractable diseases; happily it is rarely met with. Hebra remarks (vol. ii. p. 396, Syd. Society's Trans.): 'In my essay upon pemphigus, published in 1842, I gave the results of my own experience as to the treatment of the complaint. I stated that it could not be cured either by diuretics or drastics; nor, on the other hand, by tonics (such as bitters, quinine or acids), full diet and wine. And now, at the end of twenty-three years, having again to express my opinion, I have only to confirm in every point that which I formerly wrote. For I even yet know of *no internal medicine* which has proved efficacious against pemphigus.'

I cannot entirely endorse Hebra's view, for I am quite sure that a certain proportion of cases improve greatly under the persistent administration of arsenic in full doses. Hebra recommends as the best local treatment the use of the '*simple continuous bath.*' He mentions one patient who remained continuously for one hundred days and nights in the bath, excepting only when his bowels were relieved, and he subsequently repeated the process for a hundred and nine days after a relapse. He also says: 'One patient remained in it seventy-six days, another forty-seven days, and a third twenty-six days. By the end of these periods respectively, a cure took place.' It may seem strange to those not acquainted with the pain and annoyance of pemphigus that a person should be willing to remain in a bath for a hundred days and nights, but the fact is that the patients are far more comfortable in the bath than out of it. The bath should be fitted with a horse-hair mattress and pillow, and a supply of soft blankets. The present convenient mode of keeping baths at a uniform temperature by means of gas burners might be advantageously used. If the continuous bath cannot be borne, the best plan is to dress the sores in the usual way with lint and zinc ointment or some other simple and soothing application.

REFERENCE TO PLATES.

Pemphigus. Syd. Soc.'s Atlas, plate 13; Fox's Atlas, plate 29; Wilson's Atlas, portrait A.G.; Cazenave's Atlas, plate 12 (good).

Pemphigus foliaceus. Fox's Atlas, plate 30; Cazenave's Atlas, plate 13 (good).

GROUP 3.—ECZEMATOUS GROUP.

Eczema—Pityriasis Rubra—Porrigo Contagiosa—Ecthyma.

ECZEMA.

Definition.—Eczema may be briefly defined as a simple inflammation of the skin, which, in its typical form, is characterised by the production of aggregated papules and vesicles, which quickly burst and leave an excoriated surface discharging a gummy, serous fluid that stiffens as it dries. Subsequently, the eruption assumes the form of dry red patches, covered with thin scales. The disease is always attended with much itching, and generally runs a chronic course.

Symptoms.—The most remarkable feature in eczema is its variable appearance. No other disease of the skin (syphilis excepted) is capable of assuming so many different forms and phases, which vary with the attendant circumstances or the progress of the malady. We often, for example, notice in the same patient, and even in different parts of the same patch of eruption, that the skin is in one place red and swollen; in another, covered with bright red papules; in a third, clear vesicles; in a fourth, excoriated surfaces and pustules; while elsewhere we find, perhaps, yellowish crusts and dark scabs, or dry scaly patches. From this polymorphic character of the disease it happens, that although eczema is by far the most common skin affection, and as such, familiar to everyone, yet there is perhaps no other which leads to so many errors in diagnosis. It is confounded with erythema, erysipelas, psoriasis, lichen, pityriasis, scabies, sycosis and some others, but the errors are almost always in one direction. These different diseases, scabies excepted, are not mistaken for eczema, but eczema is often mistaken for one or other of these diseases. For example, acute eczema of the head and face, which is attended with much swelling and little or no discharge, is very commonly mistaken for erysipelas. Old dry scaly patches of eczema are often regarded as psoriasis, and papular eczema as lichen. In the two latter cases the mistake is of no great importance, but the same cannot be said with regard to erysipelas and scabies.

In order to avoid these errors in diagnosis, it is necessary constantly to bear in mind what are the different forms assumed by eczema in its various stages of development, and also, that it may be arrested in its progress and become *chronic at any one of those stages* without passing through all its usual phases; and moreover, that it often suddenly stops short or *aborts at a very early period.* It is ignorance of this latter fact especially which leads to the confounding general abortive eczema, in which only hyperæmia and numerous small red papules are developed, with erythema, lichen, and even the exanthematous eruptions. Formerly the various stages of eczema were regarded as different varieties of the disease, and each received a distinct and appropriate name. These names are still retained, and supply a convenient mode of expressing briefly the stage or degree of progress in any given case. Thus, if eczema passes through all its typical phases, we have first, *hyperæmia* of the skin, quickly followed by the development of small red papules—*Eczema papulosum*—(often erroneously called lichen); these papules quickly become vesicles, and then we have *Eczema vesiculosum*; soon the vesicles run together, and thus the outer layer of the epidermis becoming detached, leaves an excoriated discharging surface on which crusts form—*Eczema ichorosum*; when the skin is very red, and there is much weeping from these surfaces, the name *Eczema rubrum vel madidans* is applied; subsequently the discharge ceases and the skin becomes dry and scaly, with exfoliation of imperfectly developed cuticle, it is then called *Eczema squamosum*; sometimes when the cuticle cracks, so that deep fissures are formed at the folds, *Eczema rimosum*; and lastly, if, as occasionally happens, the inflammation passes to a pustular form, so that the vesicles are converted into scattered pustules, it is called *Eczema pustulosum*, or if the excoriated surfaces discharge a puriform fluid, *Eczema impetiginosum*. It is scarcely necessary to repeat that one or many of these different appearances of eczema may be seen at the same time in different parts of the body according to the age of the eruption and other attendant circumstances. The typical stages of eczema above-mentioned are so well known that it will be quite unnecessary for me to describe them in detail. I will, however, point out some considerations of a general kind which are of more or less diagnostic value, and then discuss the differential diagnosis of those forms of eczema that are most easily mistaken for other affections of the skin.

I. *Locality as a means of diagnosis.*—It is true that *eczema* may occur on any and every part of the body, but nevertheless, it is especially liable to attack certain regions. *Firstly,* it has a special affinity for the *junction of skin and mucous membrane,* and is, therefore, common about the anus, genitals, navel, mammæ, lips, eyelids, nose, and auditory meatus. *Secondly,* it has a predilection for the soft or flexor side of the body and limbs; hence it is common at the bends of the elbows, axillæ, perineum and inner side of the thigh; on the leg it is common everywhere, but especially a little above the ankle. In all these respects, eczema contrasts remarkably with psoriasis, which is rarely found about the edges of mucous membranes, and attacks the extensor rather than the flexor sides of the limbs, and the dorsal rather than the ventral aspect of the trunk. In the region of the head, eczema is very common on the hairy parts, though rarely confined strictly to those parts. *Lastly,* when not of artificial production, the disease is usually roughly symmetrical.

II. The subjective sensation of *itching* is of considerable diagnostic value, because it is always present in eczema, and generally in an excessive degree. The only exception to this rule is found in cases of *acute* eczema, in which the sensations of pain, burning and smarting, for a time mask or take the place of itching; but when the acuteness of the inflammation subsides, itching is sure to arise. In no other affection of the skin, except prurigo, is itching so universally present as in chronic eczema, and patients are wholly unable to resist the temptation to scratch themselves.

III. The *causes* of eczema should never be left entirely out of consideration when making a diagnosis. It is well to remember that the disease is common at all ages and in both sexes, and that it is very liable to recur; that the only well established *predisposing* causes are, hereditary tendency to the disease and a *gouty diathesis,* and that anxiety and worry of all kinds are the most common *exciting* causes; that in those who have a tendency to eczema, any local irritation of the skin by means of stimulating plaisters, tincture of arnica, strong liniments, and many other counter-irritants will produce an attack of the disease. A similar effect may be produced by certain occupations in which the hands are kept constantly wet or in contact with irritating substances. We have familiar examples of this kind in the case of barmen, washerwomen, bricklayers, and others, while 'prickly heat' is an example of eczema induced by high temperature and excessive sweating. Many other examples might be given of the circumstances under which we may expect to meet with eczema.

IV. The *history* of the present or of some previous attack may be of diagnostic value. For example, it may be a little difficult to say on inspection whether a white, scaly, dry patch of skin should be called eczema or psoriasis; but if we knew that some months before it was an inflamed, moist, discharging surface, we should have no difficulty in deciding in favour of eczema—not that it is essential that such should have been the case in order to prove it eczema, but the presence of a watery discharge excludes psoriasis.

Differential diagnosis.—Eczema must be distinguished from erythema, erysipelas, psoriasis, lichen, erythematous lupus, scaly syphilis of the palm, sycosis, scabies, and seborrhœa respectively. The differentiation of some of these diseases and eczema will be found discussed elsewhere, and will, therefore, be given here only very briefly.

1. Eczema can be mistaken for erythema only in the hyperæmic or early papular stage of the former; later on, when vesicles appear, no error is possible. The following are diagnostic marks: (1) Erythema papulatum and tuberculatum appear commonly on the backs of the hands, and when present elsewhere are almost sure to be found also on those spots which are not especially favourite seats of eczema. (2) The eruption of Erythema papulatum and

tuberculatum is in the form of more or less isolated, smooth, slightly raised, purplish-red spots of the size of a pin's head and larger. In eczema, on the other hand, the redness and papules are not isolated, but form continuous patches of considerable size, beyond the edge of which numerous outlying minute red points or papules, may be seen. (3) The surface of the skin in eczema has not the peculiar smooth appearance that is seen in erythema. (4) In erythema there is sometimes itching and a slight burning pain, but at other times there are no subjective sensations; in eczema, on the other hand, pretty severe itching is always present. *Diffuse erythema* is a little more difficult to distinguish, but the red patches are *distinctly raised*; they have the characteristic *smooth uniform surface and abrupt well-defined margins*, with few, if any, outlying minute red points which are so typical of eczema.

2. It is only in its *acute form* that eczema can be mistaken for erysipelas. This is especially likely to happen in an early stage when acute eczema attacks the head, and leads to a copious exudation, not on the surface but into the subcutaneous connective tissue, producing much œdematous swelling and redness of the face, so that the eyes are completely closed. When a free discharge of serous fluid occurs, as it generally does in a few days, the œdema subsides, and the case presents the ordinary appearance of acute eczema.

The characters which distinguish erysipelas are the following: (1) The eruption is preceded by well marked rigors. (2) *The pulse and temperature are always high*, the latter often 103° or 104°. (3) Other febrile symptoms are present, such as delirium at night, or albuminuria. (4) A patch of erysipelas has a more sharply defined margin than one of eczema, and a smoother and more glazed surface, while beyond the margin we do not see the numerous scattered minute red papules so common in eczema. (5) Erysipelas spreads rapidly by continuous extension at its margin, and we always find that the lymphatic system is involved in the inflammatory process. (6) The pain and tension due to erysipelas is, as a rule, greater than that of eczema. Bearing in mind these diagnostic points, it will be found easy enough to distinguish acute eczema from erysipelas. There are, however, two facts worthy of especial note as liable to mislead beginners; *firstly*, that erysipelas may easily occur in the course of an attack of eczema, and thus the two inflammatory processes become, as it were, mixed; *secondly*, that the presence of vesicles, bullæ, pustules and crusts, form no absolutely distinctive mark between the two diseases, because they may occur in both kinds of inflammation, though their appearance in the two cases is somewhat different; vesicles, for example, are far more common in eczema than in erysipelas, while blebs are perhaps more common in the latter malady.

3. The differential diagnosis between psoriasis and eczema is referred to under the head of the former. It is of course only dry scaly eczema that can be confounded with psoriasis. The following are the chief diagnostic points between them. (1) Psoriasis especially attacks the point of the elbow, and the skin below the knee-pan, and when it exists elsewhere, these spots will be generally found also affected; eczema, on the contrary, rarely attacks these regions. (2) In eczema squamosum there is often the history of a former moist stage, or a spot of unmistakable eczema may be found elsewhere; psoriasis is never moist and running. (3) The itching of scaly eczema is always pretty severe; that of psoriasis often slight and sometimes altogether absent. (4) The scales of dry eczema are thin and the patch not much raised, those of psoriasis are thicker and whiter, and the whole patch more raised, and on the forcible removal of the scales, bleeding is readily produced. (5) The edges of patches of dry eczema usually fade away into healthy tissue; psoriasis patches, on the contrary, are thickest at the edge and end abruptly. (6) The nails often become spotted, cracked, and brittle in

psoriasis, but rarely so in eczema, unless there is or has been distinct eczematous inflammation around them. (7) Eczema frequently attacks the junction regions of the skin and mucous membrane; psoriasis very rarely.

All these points of distinction will not be applicable in every case, but there will be a sufficient number to make the diagnosis generally easy. It should, however, be remembered that there are many cases of scaly eczema that have never passed through the moist stage, so that there has never been a serous exudation on the surface of the skin; at least, not in sufficient quantity to give the slightest indication of its presence to the patient. In these cases the exudation is *extremely* small, and occurs only between the layers of epidermis; it dries very quickly, and, so to speak, never breaks the skin; but in consequence of this minute discharge the cuticular layers exfoliate very rapidly, and much more easily than in psoriasis. Careful microscopical examination of the under surface of the scales will generally show a little dried up exudation; this fact I have often demonstrated to my class, and especially in cases of Pityriasis rubra, confirming the fact, if confirmation were needed, that this disease is really a rare and peculiar form of eczema, as it is now regarded by Erasmus Wilson, Neumann, and even by Hebra himself, who was the first to describe the affection as a distinct disease.

4. Lichen ruber and lichen planus are not likely to be confounded with dry scaly eczema so long as the lichenous papules remain discrete; but when they are packed closely together, so as to form a continuous scaly patch which itches severely, a little care is required in arriving at a diagnosis. A careful examination of the skin will generally reveal some scattered flat-topped, shiny papules, beyond the margin of the continuous patch, and enable us to determine that we have to deal with lichen and not dry eczema.

5. Lupus erythematosus and dry scaly eczema may be confounded; the former, however, is hardly ever met with

before the age of twenty-five, and occurs for the most part on the face as a circumscribed patch with a well-defined border. It spreads slowly at the margin and leads to structural alteration in the skin, which is not the case with eczema.

6. There is a dry and cracked condition of the cuticle of the palm and sole often met with in gouty and eczematous subjects, and which really consists in an imperfectly developed eczema, but which may be mistaken for dermatosyphilis (*Psoriasis palmaris*). It is, however, attended with more itching than the latter affection, and the coppery hue and generally unhealthy appearance are absent. The history of the case will also be a further guide to diagnosis.

For the differential diagnosis between eczema and scabies, sycosis and seborrhœa, respectively, see under the head of those diseases.

Etiology.—It is impossible to discuss the treatment of eczema in a satisfactory manner, without taking notice of the causes of the disease, for the treatment must depend not only on the degree and position of the inflammation, but also on its origin. The principal causes of the malady may be conveniently divided into two groups: (1) those that are external and obvious, and consist for the most part in different forms of local irritation; (2) those that are internal and often constitutional. It must be added, however, that there are a large number of cases of eczema for which no assignable cause can be found.

With regard to the frequency of eczema, there can be no doubt that it is by far the most common inflammatory affection of the skin, and that it is rather more common in males than in females. It is met with at all ages, but especially in infancy and advanced life. It is commonly said that in the young it attacks by preference the head, in adults the trunk, and in the aged the legs. This is partially true, for in infancy the head is very liable to suffer, and in old people, in consequence of impaired circulation or varicose veins, the legs are very apt to be affected; but adults, as such, are not more liable to eczema in one part of the body than another. Of external agents that give rise to eczema some act as chemical, others as mechanical irritants. To the former class belong stimulating ointments, lotions, plaisters and blisters. I have seen, for example, on many occasions a copious eruption of eczema produced by the free inunction of sulphur ointment, used with a view to cure an imaginary scabies. Local applications of even the simplest kind will under some conditions give rise to eczema. Again, the power of heat and cold, especially the former, to excite eczema, is well known. Exposure to the sun when the skin is not accustomed to it, as, for example, on a hot day in the spring or on first going to the seaside, often supplies an illustration of this fact. Excessive sweating is another common and sometimes very troublesome cause of eczema, as we find in chronic cases of hyperidrosis. Again, a sudden outburst of eruption is sometimes produced by a Turkish bath, while in tropical countries 'prickly heat' is the result of sweating and high temperature. The action of water, and especially salt and hard water, as an exciting cause of eczema should never be forgotten, as it is a point of great practical importance in the treatment of the disease. I have met with very many cases in which eczema has been kept up for months, simply by the practice of frequent washing.

Mechanical irritation is occasionally an exciting cause of eczema. Irregular pressure, for example, on the skin, especially if it be intermittent, is very apt to produce it. A badly adjusted truss will sometimes give rise to it. It is met with in certain handicrafts and under many other circumstances. But the most important mechanical causes of eczema are perhaps the different species of pediculi and the *Sarcoptes hominis.* The irritation of these parasites, together with the scratching of the patient, which plays a very important part, will set up any amount of eczema by mechanical means alone.

Passing to the *constitutional causes* of eczema, some are well known and recognised by all, others more obscure or doubtful. Varicose veins may be mentioned as amongst those most universally admitted. Venous congestion is very generally followed by serous exudation, and if the condition becomes chronic, as sometimes happens from varicose veins of the leg, eczema is the natural result. In the same way, eczema about the anus is favoured by congestion of the veins of the rectum or by piles. Perhaps the most common internal cause of eczema is an *impaired digestion and imperfect assimilation of food.* This fact is of great practical importance in the treatment of the disease, because in many cases our attention would be in vain directed to the local treatment of the malady, unless we at the same time adopted means to improve the powers of digestion. Similar remarks apply to that form which is associated with disordered menstruation, and which is often met with in girls at the age of puberty; simple local treatment in these cases is almost useless. Pregnancy, and more particularly protracted lactation, is a common cause of eczema. In the former the nervous system probably plays an important part, while in the latter the malady is kept up by a condition of general exhaustion. It can hardly be doubted that the symmetrical character of eczema points to a constitutional origin, and whether we regard this as due to faulty innervation, impurity of the blood, to defective excretion, or to some other cause, we yet, in all cases, acknowledge some general defect in the system. But there is this important fact, which cannot be too strongly impressed on those who have to treat eczema, namely, that *an eruption, which at the outset was due to constitutional disturbance, often lasts long after that disturbance has subsided, and then becomes a strictly local affection, to be treated chiefly by local means.* As long as fresh crops of symmetrical eruption continue to appear, we may be sure that some faulty condition of the system remains, and we must direct our especial attention to the internal treatment; but when the recurrence of new spots has ceased, we may with advantage adopt active local means of cure. In practice, the two forms of treatment may often go on *pari passu* with advantage, but the distinctions I have pointed out should always be kept in mind.

Amongst the predisposing causes to eczema, the gouty or quasi-gouty constitution has always been considered one of the most important. The fact is, that gouty symptoms and eczema arise from the same causes, namely, *mal-assimilation* and defective *excretion*, and the conditions that give rise to an attack of gout in one person will produce an attack of eczema in another. Lastly, anxiety, worry, or protracted trouble of any kind, is the most common *exciting cause* of both affections.

An opinion exists among the public, and also to some extent among the medical profession, that eczema can be 'driven in' as it is called, and thus produce serious inflammation of some internal organ, and therefore that curing an eczematous inflammation is not unattended with risk. After considerable experience in the treatment of this disease, I cannot say that there is any real foundation in fact for this opinion, but it is not difficult to explain its origin. It often happens that an infant or an elderly person in apparently good health, but suffering from eczema, has a sudden attack of bronchitis, diarrhœa, or some other internal inflammation; coincidently with this attack all the eczema disappears, but as soon as the bronchitis or diarrhœa has passed away the eczema reappears. What can be more natural on the part of the public than to suppose that the doctor has driven in the eczema and produced the internal mischief? The fact of course is, that the internal disturbance really precedes the disappearance of the eczema, but the one follows so closely on the other that an erroneous conclusion is easily formed. On this subject, Hebra, speaking of the supposed danger of producing a rapid cure in diseases of the skin, says (vol. ii. p. 140): 'Now I am unfortunately obliged to confess my ignorance of any remedy that can produce such a sudden and rapid cure; indeed, I can only repeat what I said in the year 1846: "that it has been my most ardent wish, the stimulus of all my studies, to cure chronic cutaneous diseases as quickly as possible, and yet, to my most sincere sorrow, I have never succeeded, in spite of the use of all possible means, internal and external, in curing such a disease suddenly or even quickly;" and while my experience since has only confirmed this, it is particularly true in the case of eczema.'

Treatment.—Acute eczema is an affection of the skin attended with swelling, infiltration, redness, and other symptoms of severe inflammation, and as such requires pretty active treatment both general and local. The basis of all internal treatment should be free purging, and generally sulphate of magnesia is the most suitable drug for this purpose. Sometimes it will be advisable to administer a calomel and colocynth pill every night, followed by a saline draught in the morning. The most convenient purgative for children is a calomel lozenge. Some care as to diet must not be neglected, and abstinence from coffee, malt liquors, wine and spirits, should be strictly enjoined. If the inflammation be distinctly of a gouty character, the fact must be taken into consideration in dealing with the case, and small doses of colchicum and salicylate of soda (25) may be exhibited with advantage.

In the local treatment of acute eczema, ointments and tars of all kinds must be strictly avoided, cold water dressing must be constantly applied, and care should be taken to use boiled, or, still better, soft or distilled water. If the effect of cold is desired, the water dressing should be kept thoroughly wet and not covered with oil silk, so as to allow free evaporation; but if, on the other hand, cold is not specially indicated, oil silk may be used, only in no case must the dressing be allowed to get dry. Simple lotions, such as the lotio plumbi, may be substituted for water dressing, but they should be applied in the same way. If liquid applications do not suit or are otherwise inconvenient, an excellent plan of treatment is to powder the skin lightly with a mixture of oxide of zinc and starch, and then cover the parts affected with linseed meal poultices, which should be changed pretty frequently, so that they do not become dry and hard. Rest and the recumbent position are *essential* in all severe cases of acute eczema; but if the inflammation is confined to the arm or hand, support in a sling may suffice.

Subacute or chronic eczema.—The constitutional treatment of subacute eczema is similar to that already indicated as appropriate in acute eczema. Alcoholic stimulants, coffee, and sugar should be generally avoided, but in the case of elderly people, alcohol must be discontinued with caution, more especially if the patient has been in the habit of taking it freely. The action of the bowels must be regulated by a judicious use of purgatives, either with or without tonics, according to circumstances. The preparations of arsenic are especially useful in the *treatment of children,* and may be given either with alkalies or in combination with iron. In the treatment of old people and debilitated subjects tonics are of great value, especially the different forms of iron. Haustus ferri (22 and 23) or some modification of it may be given with advantage. In cases attended with intolerable itching, strychnine or nux vomica sometimes does good.

Eczema in children is often promoted, if not produced, by the irritation of intestinal worms or teething, still more often by too frequent washing with water. These and other exciting causes should be removed as far as possible. The food of infants should be carefully regulated. The mother's milk is often too poor to nourish the child, and in this case it should be fed with fresh milk and water from a bottle, or Swiss milk may be used, or, still better, a healthy wet nurse. In cases of eczema in strumous children the administration of cod liver oil during the winter is sure to do good if it is easily digested, but if it interferes with the appetite it does more harm than good. In chronic eczema in children a little bitter ale or stout sometimes does great good, but it must be used with discretion and moderation.

The local treatment of subacute or chronic eczema is quite as important as the constitutional treatment. It fails most frequently from three causes: (1) the imperfect removal of crusts, (2) the inefficient and injudicious mode of applying remedies, (3) the too frequent washing with water. A few general directions with reference to these points may therefore prove useful.

To remove crusts, lubricate well with oil, and apply rags thoroughly soaked in oil for an hour or two, then use a hot bread and water poultice: if the scabs are very hard the poultice must be left on for several hours, but this is not generally necessary; when the crusts are softened they should be removed carefully with a piece of card, a comb, or the finger, and any hairs attached to them cut with a pair of scissors. The parts affected should then be well cleaned with weak gruel, yelk of egg, or soft soap and water according to circumstances. Soft or potash soap is best applied by dipping a piece of flannel into warm water, laying a portion of soap upon it, and then rubbing the part well until a good lather is formed. It is only the chronic forms of eczema that will bear this vigorous washing with soap and water.

Ointments should not, as a rule, be merely rubbed on the eczematous surface, but applied carefully on strips of lint or linen rag, which should be changed at least once in every twelve hours and closely approximated to the part affected by means of a bandage, nightcap, mask or strapping, according to the locality of the disease; the surface is thus thoroughly covered, and exposure to the air avoided, a matter of no small importance, as it prevents the drying of the exudation and the formation of crusts. In some situations, ointment should be applied by simply rubbing it on with the finger; and in the external ear and nostril it should be carefully inserted with a camel's hair brush or on a soft plug.

Cooling lotions, when used for eczema, should generally be applied on lint or linen rag, thoroughly soaked, and covered with oil silk. The dressing must never be allowed to get dry, and it should be kept in position by a bandage, strapping, or other convenient appliance. *Drying lotions* should be applied with a large camel's hair brush, or a soft badger's hair shaving brush answers very well. When ointments and lotions are used alternately, the parts affected must be thoroughly dried before each fresh application of the ointment. In subacute eczema, when there is a large excoriated surface, linimentum calcis, to which a few drops of creosote or a little carbolic acid has been added, will be found an excellent application; it may be sometimes thickened with advantage by the addition of oxide of zinc or chalk (the former will mix best, the latter is more soothing).

Tars, unless well diluted with mild ointment, must never be used until the red points and infiltration of the eczematous surface have disappeared and the exudation has ceased; in short, not until the disease has arrived at the stage of *eczema squamosum*. It is only a want of discrimination that has brought the use of tars into discredit with some practitioners. Common tar, the oil of cade, and the oleum rusci (oil of birch), which is less irritating than any other tar, should be applied with a rather stiff brush, and rubbed on till they become dry. It is generally advisable to use an alcoholic solution of tar, or in some cases the tar may be diluted with glycerine. All tars must be used with caution, and only small portions of the diseased skin treated at one time; when, however, it is evident that the skin will bear the application well, larger surfaces may be covered with it. The first trial of tar or tar ointment on a small patch of the skin, in order to test its effect, is a rule which must *never be neglected.*

In all cases of eczema the *ordinary washing with water or soap and water must be forbidden*; and this is especially the case when the new, delicate and healthy cuticle is forming, for then water macerates and destroys it, and thus the duration of the disease is needlessly prolonged. Frequent starch powderings and moderate friction may be sometimes substituted for washing; but when at this stage the use of some liquid is absolutely necessary, weak, strained gruel is always to be preferred to soap and water.

Sulphur ointments should never be used in the early stages of eczema, as they tend to irritate the skin and thus increase the mischief; an exception, of course, being made in the case of scabies complicated with eczema. Lastly, the friction of clothes, especially flannel, is very objectionable, and scratching must be prevented as much as possible; with this view, soft gloves should be worn by children night and day, and the eczematous parts should be kept constantly covered and protected.

Chronic eczema.—The indication in dealing with an old patch of dry chronic eczema, is first to convert it into the subacute form and then to cure it. If there is infiltration of the skin, this must be removed by a free application of soft soap, well rubbed on till the red points of eczema appear; this process must be repeated from time to time, until the infiltration has disappeared and the skin is soft. In some cases the fluid potash soap (16) may be preferred to the ordinary soft soap, which has a rather unpleasant smell. The fluid soap should be rubbed well over the part affected, and then allowed to dry on, but it must be washed off before a fresh application is made. When there has been infiltration for a long time without any excoriation of the surface, citrine ointment is one of the best stimulants to the skin; it should be simply rubbed on once a day. If the infiltration is great, or the epidermis much thickened, solutions of potassa fusa may be used with excellent results.

A solution of five grains to the ounce is usually sufficient; it should be applied with a large brush once or twice a day, and when the smarting which follows its application is severe, it may be washed off with cold water. If, however, the patch of eczema is small and very obstinate, one drachm of potassa fusa to an ounce of water may be used, but it should be applied only by the medical attendant himself. These solutions of caustic potash must be employed with great caution in the treatment of old people. When the eczema consists of very chronic, dry and small patches, one of the best plans of treatment is to blister them with acetum cantharidis or liquor epispasticus. This plan I can from experience strongly recommend. After the cuticle has thus been removed, the patch must be treated in the usual way with zinc ointment or something of the kind; the object aimed at in this and all other similar plans being to remove the indurated tissues, and thus allow the ordinary treatment to be adopted with effect.

Local forms of eczema.—Eczema of the scalp. In children, the hair should be cut short and the head well lubricated with oil, then a hot poultice should be applied until the crusts are softened and can be removed. The scalp must be well cleaned with weak strained gruel or soft soap and flannel, and subsequently washed with cold water. When all the scabs have been removed, and the skin thoroughly dried, it should be dressed with the unguentum hydrargyri cum plumbo (42), or with a mixture of zinc and white precipitate ointment made thin by the addition of vaseline. At a later stage, when the discharge has ceased, the red oxide of mercury ointment freely diluted with vaseline is an excellent application.

Sometimes lotions are more suitable and convenient than ointments; if this is the case, a weak carbolic acid lotion (1 in 80) will often be found an invaluable remedy. When scabs re-form they must be removed and the head cleaned from time to time with weak gruel or yelk of egg, but it must always be carefully dried afterwards. In some cases it is necessary to keep the head covered with a flannel or cotton cap. If the head is very hot and irritable, cooling lotions may be used in the day and ointments at night. In the later stages, a little tar or carbolic acid may be advantageously mixed with the ointment. In the treatment of women, when the hair cannot be cut short, the crusts must be thoroughly softened by rubbing in plenty of oil, and the hair well combed daily to bring away the scabs; when these are loosened, the head must be well washed in the usual way, thoroughly dried, and then some appropriate ointment applied.

Eczema of the face.—The crusts must be first removed in the way above indicated, or a soft ointment made of unguentum lithargyri (31) and olive oil may be kept constantly applied on linen; this will soften the scabs in a day or two, so that they can be removed and the face washed; then the parts affected should be accurately covered with strips of linen spread with unguentum zinci, which must be kept in close contact with the skin by padding and a flannel or calico mask; or if that is found uncomfortably hot, an elastic knitted nightcap may be drawn over the face instead of the mask. The dressing must be repeated night and morning, the old ointment being wiped off before the fresh is applied. This plan of treatment should be continued till all the red points disappear; then if the disease shows a tendency to become chronic, a little carbolic acid or camphor may be added to the ointment.

Eczema of the nostrils.—One nostril should be treated at a time, and a plug of some soft material soaked in oil introduced. When the crusts are thus softened they should be carefully removed, and a plug of soft material smeared with mild citrine or the yellow oxide of mercury ointment (32) introduced. In chronic cases, solution of nitrate of silver should be applied with a camel's hair brush.

Eczema of the hairy parts of the face.—Impetiginous eczema of the hairy parts of the face (often miscalled sycosis) is one of the most obstinate forms of inflammation. Moderate purging, and the administration of arsenic in full doses, is the only internal remedy likely to do good. The local treatment is of more importance. The hair should be cut short with a sharp pair of scissors, but not shaved, and crusts removed in the usual way. In an early stage, astringent lotions of lead and opium or sulphate of zinc do good, and relieve the pain and discomfort; at night, a simple vaseline salve should be freely applied, to keep the skin soft and to prevent the formation of scabs. As soon as the inflammation has passed into the chronic stage, epilation should be commenced; it is in many cases the *only means of cure*, and tends greatly to diminish the risk of permanent bald patches. In *all cases* the hairs which pass through pustules should be immediately removed; they come out easily and without pain: it is generally necessary to extend this process to the other hairs of the parts affected. The pain of epilation is much less than might be expected, as the hairs are loosened and can be extracted without difficulty. Vaseline ointments, such as the yellow oxide of mercury ointment, should be freely used, as tending to soften the skin and heal the surface eczema. *Eczema* (or *Tinea*) *tarsi* may be treated with diluted citrine or yellow oxide of mercury ointment (32), and in troublesome cases the eyelashes should be pulled out.

Eczema of the auditory meatus.—Olive oil should be dropped in to soften the crusts, subsequently the ear should be syringed till all the effete matter is removed; when the ear is dry the yellow oxide of mercury ointment should be applied with a camel's hair brush, or if the case prove an obstinate one, a solution of nitrate of silver (20 grs. to the oz.) may be painted over the walls of the meatus by carefully inserting a small camel's hair brush. Sometimes a weak carbolic acid injection will be found efficacious.

Eczema of the legs.—Crusts should be removed and the skin thoroughly cleaned with soft soap or gruel; then the unguentum lithargyri (31) or the unguentum plumbi comp. (30) or the unguentum zinci should be applied on strips of lint or linen rag, and carefully bandaged from the foot upwards. As the red points disappear, a little tar may be mixed with the ointment. In some cases a drying lotion of calamine and zinc (8) answers better than any ointment, and in obstinate cases a solution of nitrate of silver (17) is invaluable. Careful bandaging is of the *first* importance, more especially if the veins of the legs be varicose. A piece of soft clean washleather may be placed over the eczematous surface, between the skin and the bandage. If ulcers exist they should be dressed separately, by inserting a piece of lint the size and shape to fit the ulcer, and smeared with the unguentum hydrar. ox. rub. diluted, or the unguentum acidi boracici (38), or they may be treated in a similar way with carbolic acid lotion. Patients suffering from eczema of the legs should remain as much as possible in the horizontal position, and in severe cases confinement to bed is necessary. Sometimes this form of the disease does not progress favourably under ointment treatment; when this is the case, lead or zinc lotion should be used on rag and covered with oil silk. In almost all cases a bandage is essential, the best kind being that known as the *cotton stocking bandage.*

Eczema of the scrotum and labia.—Eczema in this region is often relieved by hip bran baths, night and morning, and the free use of borax or some other soothing lotion, which should be sponged on and then lightly dried with a piece of soft rag; this should be followed by powdering with oxide of zinc and starch (54). When the eczema is limited to the labia, painting with solution of nitrate of silver (17) is one of the best means of cure.

Eczema of the perinæum and anus.—Eczema about the anus is often very troublesome, and the situation is unfavourable for treatment, for the region is necessarily irritated from time to time, and the close contact and heat of the parts is also disadvantageous. The calomel ointment of the Pharmacopœa diluted with vaseline answers well in some cases, while in others zinc ointment combined with a little tar ointment (a drachm and half to the oz.) gives great relief. If these remedies are too stimulating, a simple chalk or bismuth ointment, or the compound lead ointment of the old London Pharmacopœa (30) made soft with a little more oil, will be found very soothing. If ointments do not suit, the parts should be sponged two or three times a day with a borax or sulphate of zinc lotion (11), lightly dried, and then powdered with lycopodium or starch powder. It is often necessary to try a number of different remedies until a suitable one has been found, for what agrees with one person may disagree with another.

Eczema of the mamma.—This is often very obstinate. If the ordinary plans of treatment fail, Hebra recommends a strong solution of caustic potash to be applied every four or five days, and the part well rubbed with the wet hand after the application until a lather is formed; this is severe treatment, which should be only had recourse to as a last expedient. I can strongly recommend the application of a pretty strong solution of nitrate of silver. It has been noticed that incurable cases of eczema of the nipple often end in cancer. On the other hand, my experience assures me that there are a large number of very obstinate cases of eczema of the nipple which in the end get perfectly well.

Eczema intertrigo, or, as it is often called, *erythema intertrigo,* is most common in the perineal region and under the mamma. The skin should be kept thoroughly clean, but washed as little as possible, and then only with thin strained gruel, and always well dried afterwards. The opposed surfaces should be dusted over with zinc oxide and starch (54) or lycopodium powder, and kept apart by a piece of dry and well-powdered lint, which must be frequently changed. A finely powdered Fuller's earth or French chalk is also a very useful application, and sometimes answers much better than zinc or starch; if this does not succeed the surface should be painted over once a day with a weak solution of nitrate of silver (about 5 grs. to 10 grs. to the oz.).

Eczema of the hands and feet.—Eczema of the hands and feet is generally attended with thickening of the epidermis, and the appearance of small hard elevations which often itch intolerably: the cuticle is apt to become brittle, and from the movements of the parts, fissures are formed. In cases of this kind, all washing with soap and water is contra-indicated. Each finger or toe must be separately wrapped in rags well smeared over with the unguentum lithargyri (31), and kept in position by a large glove or stocking. The ointment must be renewed every twelve hours, and the skin well rubbed to remove the old ointment and the softened cuticle; by perseverance in this treatment a cure can be generally effected. Another plan of treatment which I have often successfully adopted in *eczema rimosum*, when the skin is very dry, hard and fissured, is to wrap the hands up in rags kept constantly wet with a liquor potassæ lotion (℥ij ad Oj), and covered with thin gutta percha or a loose india-rubber glove. The process must be continued for several days, until the cuticle is thoroughly white and macerated and peels off. The hands should then be dressed with some soothing ointment, and subsequently with rags soaked in glycerine, and kept in position by means of a glove. Troublesome cases of chronic eczema of the hand may often be cured by inclosing the hands in loosely fitting india-rubber gloves tied round the wrist. These must be worn constantly, day and night, but removed twice in the twenty-four hours for the macerated cuticle to be rubbed off with bran. This plan, which is most applicable in chronic eczema, is also sometimes effectual in subacute cases, especially when the disease attacks the ends of the fingers and the nails.

In very troublesome cases of eczema of the palm, when the cuticle is much hardened and thickened, Anderson advises blistering with strong cantharides fluid; it should be painted on once or twice until the skin is thoroughly whitened, and then a hot poultice applied; when the cuticle has been removed the hand must be dressed with ointment in the usual way. I can strongly recommend a similar plan as most successful in dealing with small obstinate chronic patches of thickened cuticle wherever they are situated; in many cases it is the only way of removing them.

In dealing with eczema we must always bear in mind Hebra's advice, that 'whatever course be adopted in treating chronic eczema, constancy and perseverance are of the utmost importance. He who is always changing his plan of treatment is sure not to attain his object so quickly as one who steadily and patiently applies whatever remedy seems best suited to his case.' The most useful formulæ in the treatment of eczema are the following: lotions, (8), (9), (10), (11), (12), (16), (17), (21); mixtures, (22), (23), (24), (25), (26), (27); ointments, (30), (31), (32), (38), (39), (40), (42); powders, (52), (54).

Reference to Plates.

Eczema. Syd. Soc. Atlas, plates 15, 16, and 25; Fox's Atlas, plates 15–22; Hebra's Atlas, Heft 4 (a large number of excellent plates); Cazenave's Atlas, plates 9 and 10 (not good).

PITYRIASIS RUBRA.

Pityriasis rubra[1] is now generally recognised as a peculiar form of eczema, but is quite sufficiently distinct from the ordinary varieties to deserve especial notice. It differs from common eczema chiefly in the entire absence of moist exudation on the surface of the skin, and in the extraordinary exfoliation of cuticle. The first distinction I consider more apparent than real, for from a careful microscopical examination of the scales in this disease, I have detected traces of dried exudation on their under surface in several cases; the fact is, that the exudation is subcuticular, and so small in quantity that it dries before the scales are completely separated; in my opinion the slight exudation which occurs between the layers of the cuticle is one of the chief causes of their very rapid exfoliation. In typical cases of this disease the patient presents a very striking appearance; the whole skin is affected from the sole of the foot to the crown of the head, the skin itself is highly congested and of a deep crimson red colour, but not infiltrated or thickened; it is covered with loose whitish scales and layers of dead epidermis which sometimes have the appearance of armour plates overlapping each other in wavy rows. Occasionally the epidermis peels off in pieces as large as the palm of the hand, while at other times the scales are small and branny. The rapidity of the exfoliation varies in different cases and from time to time in the same individual, but often it is so excessive, that a pint measure may be nearly filled with the scales that rub off in the course of twenty-four hours. The nails commonly participate in these changes and become uneven and opaque. There is no apparent moist exudation. In many cases the itching is slight, but the tenderness of skin is excessive, and when the cuticle has been recently removed, the contact of anything gives pain. Associated with this state of skin, there is generally an enfeebled condition of the vital powers and general debility. Writing of this disease some fifteen years ago, Hebra remarks, 'According to my past experience of *Pityriasis rubra*, it has invariably terminated fatally after a duration of many years. How far these observations may hereafter be confirmed must remain an open question. But the fatal issue of the cases I have seen, and the failure of the treatment I employed, have been among the main reasons which determined me to admit the *Pityriasis rubra universalis* as distinct from *Eczema squamosum*.' Since Hebra wrote, further experience has revealed the fact that these cases are not always fatal; and moreover, that a partial or local form of the disease exists which differs in no respect from the universal affection except in the extent of tissue involved. Some years ago I had under my care at the same time in the Middlesex Hospital, two typical cases of this disease in its universal form; in both cases there was albuminuria, and we noticed that any temporary improvement in the condition of the skin was always associated with a diminution in the amount of albumen. One of these cases recovered and left the hospital well, and with the urine free from albumen; the other died under my care, and a *post-mortem* examination disclosed chronic disease of the kidneys. My friend Dr. Henry Thompson, some years ago had a case of this disease under his care in the Middlesex Hospital, which, like Hebra's cases, ended fatally, without any apparent cause beyond the disease itself, and a *post-mortem* examination failed to reveal any organic disease. The sufferers lose their appetite, their strength gradually diminishes, and they appear to die from exhaustion. Happily these severe fatal cases are very rare.

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[1] *Eczema exfoliativum rubrum* of Erasmus Wilson.

Differential diagnosis.—The recognition of *pityriasis rubra* in its typical form is not difficult.—(1) Its universal, or nearly universal, character, (2) the extreme redness and tenderness of the skin, (3) with the excessive exfoliation of thin plates or scales of epidermis, (4) the absence of thickening or infiltration in the true skin, which distinguishes it from psoriasis, and (5) the absence of any moist exudation which distinguishes it from ordinary eczema, are characters sufficient for the purpose of diagnosis.

The mild local forms of this disease are not distinguishable from *Eczema squamosum*, and it is not necessary that any distinction should be drawn between them. From psoriasis it must be distinguished, as above indicated, by the state of the true skin, which in that disease is always more or less infiltrated, or in other words, the scales are situated on a raised base. The tenderness of the skin and the exfoliation of cuticle are greater in *Pityriasis rubra* than in psoriasis, and the fissures that sometimes occur in the latter are absent in the former. The distinctions between this disease and universal lichen ruber, are noticed elsewhere.

REFERENCES TO PLATES.

Pityriasis rubra. Syd. Soc.'s Atlas, plate 30 (good); Fox's Atlas, plate 38.

PORRIGO CONTAGIOSA.

Syn. *Impetigo Contagiosa.*

The word Porrigo was used by the older writers on diseases of the skin for almost any eruption that occurred on the head. Thus we have *Porrigo favosa*, *Porrigo scutulata* (*Tinea tonsurans*), and *Porrigo decalvans* (*Alopæcia areata*), but at present its use is pretty well restricted to one affection—namely, *Porrigo contagiosa.* With regard to this disease, a difference of opinion still exists in the profession as to its exact relation to eczema. Some indeed regard it as simply a variety of pustular eczema, while others look upon it as altogether a distinct affection. It is to the late Mr. Startin and the other surgeons of the Skin Hospital, Blackfriars, that we are indebted for first directing attention to the distinctive character of this disease. Mr. J. Hutchinson remarks: 'The theory is, that this eruption is due to the transplantation of pus-cells by the patient's finger from one part to another. It is believed to be contagious, not only to different parts of the skin of the same patient, but also to other persons. It may originate from any cause which induces the formation of pus, such for instance, as a scratch. In the present instance[1] it resulted, as it not very unfrequently does, from suppuration under the scab left by vaccination. The early stage of the eruption is usually an irregular vesication, the contents of which rapidly become purulent. This eruption is to be distinguished from true eczema, in that the discharge is opaque, purulent, and glutinous, forming a thick greenish-yellow scab, quite different from the thin, flaky, half-transparent crusts which characterise eczema. In eczema the margins of the patches are usually reddened beyond the crusts, but in porrigo the crust covers completely the whole of the inflamed patch. The secretion of eczema makes linen rigid as if starched; that of porrigo differs little in its effects from pus. The two may undoubtedly often run into each other, and are closely allied forms of inflammation of the skin; they may coexist and complicate each other, but it is yet of much practical importance to distinguish them; for whilst eczema in most cases acknowledges a constitutional predisposition and is somewhat difficult of cure, porrigo is almost purely local, and may be cured with the greatest ease.'

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[1] Plate 28, New Syd. Soc.

The late Mr. Naylor supplies us with the following statistics of this affection: 'Of 400 cases in Mr. Startin's practice at the Skin Hospital, which occurred between the middle of June 1860 and the end of January 1863:

292 occurred at and under the age of 7 years,
46 between 7 and 14 years,
35 " 14 and 21 years,
27 above the age of 21 years.'

Here one of the characters of the disease, namely, its greater frequency in young children, is brought prominently forward.

The following points in connection with this disease are also especially worthy of notice. (1) The affection is much more common amongst the poor than the well-to-do classes. (2) Children who suffer from it are almost always pale and badly nourished. (3) The eruption is particularly liable to attack the occiput and the edges of the mucous membrane of the nose and corners of the mouth. (4) When the head is affected, the glands of the neck are quickly enlarged, and it is often this enlargement of the glands in their children which first induces mothers to seek for hospital advice. (5) In neglected cases, the disease is frequently associated with common eczema and with pediculi capitis. (6) The eruption, unless complicated with eczema or pediculi, is attended with very little itching.

Although Mr. Hutchinson rightly lays some stress on the fact that *Porrigo contagiosa* compared with common eczema is a more distinctly local affection, yet I am sure that a certain defective state of health generally coexists with it. Fresh spots arise where, apparently, no scratches or abrasions previously existed, and on parts of the back which are *beyond the reach of the fingers*. These spots begin as minute red points and quickly develope into little opaque vesicles, their isolated character contrasting remarkably with the eruption of ordinary eczema. The generally pale and unhealthy appearance too of children who suffer extensively from this disease is very striking.

Porrigo is easily and quickly cured by white precipitate ointment.

REFERENCE TO PLATES.

Porrigo contagiosa. Syd. Soc.'s Atlas, plates 20 and 28.

ECTHYMA AND IMPETIGO.

It is necessary to offer a word of explanation respecting pustular eruptions. As is well known, the name *impetigo* was formerly applied to any eruption of pustules, the nature or origin of which was not understood; but more especially was it used to designate pustular eczema. The formation of pus was in fact regarded as a disease, *sui generis*, rather than a *morbid process*. The development of pustules in the course of many skin affections is, as everyone knows, very common; thus, for example, we meet with them in eczema, scabies, and morbus pedicularis; and in another form, we have minute abscess-like collections of pus in acne and common boils, but in all these cases the formation of pus is only a stage in the inflammatory process, which may occur in the skin as well as in other parts of the body; the pus is, in fact, only a secondary morbid product.

The formation of pustules may arise either from external or internal causes. The commonest external cause is *irritation* of the skin, of which we have a good example in the artificial production of pustules by means of croton oil liniment or tartar emetic ointment, as well as from scabies and pediculi capitis. As examples of pustules arising from *internal causes,* may be mentioned Herpes zoster, variola, and vaccinia; but in these, as in all other cases, the formation of pus is always preceded by other and well-known signs of inflammation. Although these facts are generally admitted, yet many dermatologists of the present day still regard ecthyma and impetigo as distinct and well-defined diseases, and characterised by typical pustular eruptions. The former name is applied to an eruption of large, isolated, flat pustules situated on a hard, inflamed base, and followed by brown crusts and deep excoriations. This pustular eruption is seen for the most part on the extremities, and bears a close resemblance to some forms of dermato-syphilis. It is met with almost exclusively amongst the miserable, dirty, and poorly-fed classes, and is generally believed to be produced by bad and insufficient food, unhealthy lodgings, overwork, and other depressing influences. Dr. Duhring in his treatise on skin diseases (Philadelphia, 1877), defines impetigo as 'an acute, exudative disease, characterised by one or more pea or fingernail sized, discrete, rounded and elevated firm pustules, unattended by itching, occurring for the most part in children.' He says, that the eruption is met with on all parts of the body, but especially on the face, hands, and feet; it is attended with some soreness, but no other subjective sensations. The disease runs an acute course, usually in from one to two weeks. The pustules appear suddenly, often in the course of half a day, and are apt to come out one after another during the first two or three days of the attack. One remarkable feature is, that the pustule is not surrounded by an areola, or only a slight and transitory one. The pustules form scabs in the usual way, which drop off, and leave no scars or pigmentation.

REFERENCE TO PLATES.

Ecthyma. Fox's Atlas, plate 31; Cazenave's Atlas, plate 15.

GROUP 4.—LICHENOUS GROUP.

Lichen ruber—Lichen circinatus—Lichen planus—Lichen scrofulosorum—Prurigo—Relapsing prurigo.

LICHEN.

Definition.—Lichen may be briefly defined as a chronic inflammation of the skin, attended with the development of solid persistent papules which undergo but little change until they gradually disappear. These papules have a tendency to form clusters or patches, and give rise to more or less itching. Under the name lichen have been included at various times many diseases of the skin which we now recognise as belonging to other groups; this has led to some confusion in our nomenclature, which time alone can remove.

Willan describes five species: (1) *lichen simplex*; (2) *l. agrius*; (3) *l. tropicus*; (4) *l. lividus*; (5) *l. pilaris*; we have also in common use the terms *l. urticatus* and *l. circumscriptus* or *circinatus*. Hebra and Neumann recognise two species only—*lichen ruber* and *lichen scrofulosorum*; and Erasmus Wilson describes *lichen planus*. This array of names looks at first sight very formidable, but a little examination soon reduces them, and we shall find that there are really three, or at most four species which can be properly regarded as *lichen*.

Lichen simplex usually appears as a copious eruption of minute red and itching papules (often called 'stomach rash'). It is common in children and especially apt to affect the back and extensor surfaces, and for that very reason not very liable to produce the distinct vesicles and excoriation which are typical of ordinary eczematous inflammation; hence some writers have regarded it as entirely distinct from eczema. A careful examination however of the minute red papules with a common magnifying glass will often reveal a small vesicle at their summits, and even when this is not present the form of the papule differs from that of a lichen. It is, in short, impossible to distinguish this affection from abortive papular eczema, unless the fact that it appears commonly on the back is considered sufficient to warrant a distinction. This form of papular eczema must not be confounded with a true lichenous eruption resembling mild *lichen planus* that we sometimes see in children.

Lichen agrius is eczema pure and simple; and *lichen tropicus* is a papular form of the same disease produced by heat and sweating. *Lichen lividus* is probably a variety of purpura where the hemorrhage occurs in the papules. The *lichen pilaris* of Willan is a well-defined affection of the skin; it is not, however, an inflammatory disease, and therefore cannot appropriately be classed with the lichens. It consists of little papule-like swellings developed around the hairs of the skin and formed by the accumulation of débris within the follicle, together with more or less hypertrophy. Unless accidentally inflamed, these little swellings are pale and quite unattended with itching or other subjective sensations. They are found most commonly on the rough outer side of the legs, and in my experience are never found on the soft flexor surfaces of the body.[1] Hebra holds that they are entirely due to an accumulation of débris within the follicle, but from my own observations made on two cases under my care, I have been led to the conclusion that there is also a true hypertrophy of the tissues. But whatever be the cause of this rather curious affection, it is certainly not due to any inflammatory changes, and therefore cannot be classed among the group now under our consideration, so that of Willan's five species not one can be properly regarded as a true lichen. And thus our series is reduced to four, namely, *lichen urticatus*, *l. circumscriptus*, *l. scrofulosorum*, and *l. planus*.

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[1] The impression given, on passing the hand over the skin affected, is that of exaggerated and persistent 'goose skin,' as it is called.

Lichen urticatus is one of those convenient names which are often used as a cloak for our ignorance. It is sometimes defined as lichen mixed with urticaria, but writers who adopt this definition fail to state what kind of lichen they refer to as mixed with urticaria, and thus constituting *lichen urticatus*. In my opinion, the affection is really a form of chronic urticaria in which papule-like swellings are developed; these swellings when once formed are more or less persistent. There is, indeed, a very close relation between the development of wheals and transitory inflammatory papules. The name *lichen urticatus*, although not perhaps the best that might be chosen, is in some respects convenient, and will probably be always used for this variety of urticaria.

We now pass to the consideration of those diseases to which the name lichen is more strictly applied, namely, (1) *lichen circumscriptus*, (2) *lichen scrofulosorum*, and (3) *lichen ruber* and *planus*, which probably differ from each other chiefly in severity.

Lichen circinatus or circumscriptus is a well-marked affection of the skin, characterised by the development of rings and small round groups of papules, which have a tendency to spread at the circumference into the form of rings. Not unfrequently the eruptive spots are crowded together, so that a more or less continuous patch of papules is formed, but at the out-lying parts the orbicular character of the eruption can always be seen. The rings have usually a bright red, well-defined and narrow margin, the skin in the central part being either normal, or more commonly of a yellowish fawn colour, so that we have a pale yellow disc with a red border. When undisturbed, the rings are often most perfect, and as they spread centrifugally, their size will depend to some extent on their age, the oldest ones being the largest; where these rings intersect, we get, as usual, gyrate lines, and in all cases, we find interspersed amongst them isolated papules or small groups of two or three clustered together. In addition to the yellowish colour of the skin, within the circles of papules we sometimes see, here and there, patches of a similar colour, without any well-defined red margins; they are probably produced in a similar way, the papular eruption having disappeared, leaving behind only a pigmentary discoloration of the skin. It is important to bear this fact in mind, because the yellow patches bear a very close resemblance to *pityriasis versicolor*. I have on several occasions examined the epithelium from these yellowish spots under the microscope, but have never found any of the characteristic signs of the latter disease. In the great majority of cases, *lichen circinatus* is situated on the back between the shoulders, and extends down the central part to the lumbar region, forming a sort of irregular triangle, the base of which is directed upwards; the eruption is at the same time often found on the corresponding part of the chest in front. It is attended with decided but not excessive itching. I have never seen the eruption become eczematous, but it is quite possible that it may occasionally become so from the rubbing and scratching of the patient; the disease itself is, however, totally distinct from any variety of eczema.

Differential diagnosis.—As I have already hinted, this affection is more likely to be confounded with *pityriasis versicolor* than with any other disease, and we may be easily led into the belief that we have to deal with a mixed eruption of the latter disease, and lichen or papular eczema. It is quite possible that such mixed eruptions may really occur, and therefore, to determine the point, we must examine some of the scales from a yellow patch, treated with liquor potassæ under the microscope. In *pityriasis versicolor* the parasite can always be seen. The usual situation of *lichen circinatus* on the back and chest being the same as that of versicolor, makes care in the differential diagnosis all the more necessary.

Lichen scrofulosorum is a name given by Hebra to a true lichen or permanently papular eruption, the chief characters of which are:—

(1) The pale colour of the papules, which are about the size of pin's heads, and 'either pale-yellow, brownish-red, or of the same colour as the rest of the skin.'

(2) They are always arranged in groups and commonly in the form of circles, or rather circular patches or segments of circles.

(3) The eruption is usually confined to the trunk, and only rarely seen on the limbs.

(4) It is attended with little or no itching.

(5) The disease is of a very chronic nature, and may last for years.

(6) It occurs for the most part in young scrofulous subjects, and is more common in males than females.

Neumann remarks on the greater frequency of this disease in childhood, and that it is then often combined with infiltration at the apices of the lungs, whereas this is not the case in adults who are commonly scrofulous but not phthisical. He also says: 'When the disease is left to itself, it disappears after a time, but makes frequent returns; the papules attain a slight height, and then gradually diminish in size, so that finally the circle of a former eruption is marked only by a few scales, and, when these fall off, a pale-brown discoloration alone is left. The disease gives no trouble, and never itches.'

The disease, as described by Hebra, Neumann and Kohn, has not been generally recognised by English observers. This, in my opinion, arises from several different causes. In the first place, the eruption is often of nearly the same colour as the skin, and as it 'gives no trouble' and is unattended with itching, is easily overlooked; secondly, it is not at all common in England, especially amongst the well-to-do classes; and thirdly, as Dr. Hilton Fagge has pointed out, it might here be recorded as a variety of *lichen circumscriptus*. I have met with a few typical cases amongst the poor out-patients in my hospital skin department, but I have rarely seen characteristic examples amongst the upper classes.

M. Kohn has made a careful anatomical examination of the papules of this lichen, and believes that the appearance of *exudation-cells* in and around the hair follicles and their sebaceous glands, is an essential condition of the disease. This *l. scrofulosorum* of the German writers, appears to be allied to our ringed forms of lichen, occurring in scrofulous subjects, but it is nevertheless a distinct affection.

Lichen planus (or *ruber*[1]) is a very characteristic affection of the skin, quite unlike any other disease, and therefore, in typical cases, not difficult of recognition. The affection is somewhat rare, and of a very chronic nature. The eruption consists of papules, peculiar both in colour and form; each papule is developed round a hair follicle, and is of a dull *purplish-red* colour, well-defined, of large size (one to three lines in diameter), with a *flat, smooth, and shining top* and a somewhat *quadrangular base*. The flat top is often slightly umbilicated in its centre, where the orifice of a follicle may be seen. These papules 'never undergo peripheral growth,' they occur in groups often symmetrically placed, and are sometimes so closely aggregated as to form raised patches, which become, after a time, more or less scaly from desquamating epidermis. The patches increase in size only by the development of new papules and not by the continuous growth of the old ones. The disease is accompanied by severe itching and leaves behind dark pigment stains. Hebra has taken the deep red colour of the eruption as the most striking character of *lichen ruber*, while Erasmus Wilson regards the peculiar flat shining top as very distinctive. Taken together, these two features serve to distinguish this affection from all others.

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[1] Hebra regards these two affections as distinct.

At the outset of the disease in all cases, and throughout its course in mild ones, the papules of *lichen planus* are isolated, and then their peculiar characters can be easily studied. At a more advanced stage, however, they have a tendency to become aggregated by the development of new papules between the old ones; thus a raised infiltrated patch is formed, and the appearance of separate papules is lost; but even then scattered ones may generally be found beyond the edge of the patch. The scaliness that these patches sometimes assume may tend still further to mask the nature of the disease.

Speaking of *lichen ruber* Hebra says (Syd. Soc. vol. ii. p. 59), 'These morbid changes repeat themselves at different spots which had previously been free from the disease, and thus a state is at length arrived at, in which the papules and the infiltration of the skin to which they give rise occupy entire regions, or even the whole surface of the body. The appearance of the disease is then quite peculiar. The integument is universally reddened, covered with numerous thin scales, and so infiltrated that, when a fold of the skin is taken up, it is found to have more than twice the normal thickness. The movements of the parts affected are consequently interfered with, particularly if the flexures of the joints are affected in this way, and if the hands and feet are attacked by the disease. The patient may thus have great difficulty in effecting the complete flexion or extension of his joints, and endeavours to maintain them in an intermediate position. The skin is, however, most markedly thickened on the palms of the hands and soles of the feet, and on the fingers and toes.' He further remarks on the changes that occur in the nails. 'Sometimes there is an increased growth of nail-substance from the bed of the nail, so that this acquires more than twice its natural thickness, while it, at the same time, becomes rough, opaque, of a yellowish-brown colour and very brittle, so that it does not grow to its usual length, but breaks off before it has reached the tip of the finger. In other instances again, its growth proceeds from the matrix only, and not from the whole of its bed, so that it forms a mere thin, brittle, horny plate, which is of a lighter colour than natural, and projects more or less away from the finger.' I would point out that it is only in the extreme and rare form of this disease, known as *lichen ruber*, that these changes occur.

As long as isolated papules exist, the diagnosis of lichen is not difficult, and when the disease becomes universal, the *great infiltration* and *very slight scaliness* distinguish it at once from *pityriasis rubra*, in which the infiltration is very slight, and the scaliness great; while the complete absence of any excoriation and oozing separates it from the more common forms of general eczema. *Psoriasis* may be distinguished by the general pearly white scaliness of the patches, its peculiar tendency to attack the extensor surfaces, and by the fact that the patches increase by *peripheral growth*, which is never the case in *lichen planus*. But it must be admitted that old scaly patches of *lichen planus* without isolated papules, may be very easily mistaken for *psoriasis*.

Treatment of lichen circinatus or marginatus.—The treatment of *lichen circinatus* is on the whole very satisfactory; this form of lichen is one of the few diseases of the skin for which arsenic is almost a specific. I have had under my care cases in which the affection had tormented patients for many months, and in some few instances for years, but which yielded to ordinary full doses of Fowler's solution in a few weeks; I may add that I have never yet met with a case that did not respond to this treatment, although I am not prepared to say that cases of the kind may not exist. The best local application to relieve the itching is a pretty strong borax, soda and glycerine lotion, sponged on two or three times a day and allowed to dry on.

Treatment of lichen scrofulosorum.—The treatment of this affection is very simple; it consists in the free use of cod liver oil both externally and internally. The inunction of cod liver oil is of course very disagreeable, on account of the smell that always pervades the patient. Under circumstances in which the oil cannot be used externally, vaseline serves as a very good substitute, and is not in any way disagreeable. When cod liver oil cannot be taken internally, pancreatic emulsion may be substituted with advantage. Arsenic is also useful.

Treatment of lichen planus and ruber.—In the treatment of these affections, we must keep in mind the fact that they arise for the most part in overworked men suffering from nervous exhaustion, and therefore that rest and change of air are often an essential part of the treatment. My experience does not accord with those who hold that arsenic is of no value in dealing with these affections; on the contrary, I would say that when it does not disagree with the digestion of the patient, it will, if persevered in, almost always bring about a complete cure. In order, however, to produce this result, it must be given in full doses. It is, of course, true that patients will not always bear arsenic, and then other tonics may be substituted, more especially iron, but it is, in my experience, a remedy very inferior to arsenic. I have met with a few cases of *lichen planus*, not in any way of a specific character, in which the patient did not improve under arsenical treatment, but who recovered quickly under small doses of perchloride of mercury with cinchona. I do not know that there is any special indication for this course of treatment except a failure in the more usual method by arsenic.

Local treatment.—The local treatment should be especially directed to allay the itching which is often so severe as to deprive the patient of rest at night. Under these circumstances, alkaline warm baths the last thing at night, made with carbonate of soda or potash and bran (1) and (2), followed by the free inunction of vaseline, will often give great relief. Amongst the many lotions that may be tried to relieve the itching, one containing borax, soda, hydrocyanic acid, glycerine and spirits of wine, is perhaps the best. Sometimes a weak nitric acid lotion containing a little liquor carbonis detergens gives relief; in other cases calamine and chalk lotions seem to do more good. There is, in fact, no rule that can be laid down in the matter except this, that *whatever allays the itching does good to the eruption*; the only way is to try different external remedies, until one is found to suit the particular individual; the point to be aimed at in all cases being to relieve the irritation. In the scaly condition of this eruption ointments are to be preferred to lotions, and the skin should be kept closely covered as much as possible.

REFERENCES TO PLATES.

Lichen ruber. Hebra's Atlas, Heft iii. Tafel 2; Fox's Atlas, plate 13.

Lichen planus. Fox's Atlas, plates 12 and 40.

Lichen circumscriptus. Fox's Atlas, plate 9 (not very good).

Lichen scrofulosorum. Hebra's Atlas, Heft iii. Tafel 3; Fox's Atlas, plate 14.

Lichen urticatus. Fox's Atlas, plate 11.

PRURIGO.

Definition.—Prurigo is a chronic disease of the skin, characterised by intense pruritus and the formation of pale scattered papules.

Symptoms.—Prurigo in its severest form is almost unknown in this country, but a milder variety called *prurigo simplex* or *mitis* is occasionally met with. 'In every case,' says Hebra, 'the earliest appearance is that of subepidermic papules as big as hemp seeds, and recognised rather by touch than by sight, since they rise but little above the level of the skin, and do not differ from it at all in colour.' The development of these papules is attended with intense itching, and consequently the tops of the more prominent ones are soon scratched off and a little drop of blood escapes, forming a small dark crust at the summit of the papule; this gives to the disease a characteristic appearance. When the affection has lasted for a considerable time, we notice that the skin becomes dark from increased pigmentation, and at the same time thicker and harder than normal, so that it is somewhat difficult to pinch it up between the finger and thumb. 'If,' says Hebra, 'we go over the different regions of the body in a patient affected with prurigo, we shall find the scalp quite free from any eruption; but the hair will appear dull, will feel dry to the touch, and often look as if it were sprinkled over with dust. The face, especially in young patients, is usually clear and of a pale complexion, or a few scattered papules may be found on the cheeks, some intact, some wounded by scratching. Cases, however, occur in which a considerable number are observed in this region, or it may be the seat of an impetiginous eczema. It is rare to see any marked traces of prurigo on the throat or back of the neck; but the whole of the thorax, both in front and behind, is covered pretty uniformly with papules, some only to be recognised by the sense of touch, while others rise above the surface so as to become visible to the eye, and others again are tipped with a minute crust of dried-up blood. A similar aspect is presented by the skin of the abdomen, the sacral region, and the buttocks; but the most intense form of the disease is displayed on the limbs, especially on their extensor surfaces. The skin is of a darker hue than elsewhere, and thickened in proportion to the duration of the malady; its lines and furrows are more plainly marked on the extensor than the flexor surfaces, and most of all on the wrist, the back of the hand, the fingers, and the corresponding part of the ankle and instep, where may be seen deep and obvious lines more widely separated than in the normal condition. The eruption is less abundant above the elbow than on the forearm, on the thigh than on the leg, and on the upper than on the lower extremity. It is then below the knee that it is most intensely developed, and hence one may, with a little practice, recognise every case of prurigo by the touch alone; for the skin feels as rough as a file, and when the closed hand is passed over it produces a sound like a short-haired nail-brush or rough paper, and causes a pricking sensation of the fingers. Not only do the lower extremities in ordinary prurigo present more papules and more roughness than other parts, but it is here also that we find the greatest number of pustules or the most severe eczema when these are superadded. It is, however, very remarkable that in all cases of prurigo the skin covering the bend of a joint either remains perfectly whole, and appears smooth, soft, and healthy, or, in very rare and exceptional cases, offers a few papules or a slight degree of eczema. The armpits, elbows, flexor sides of the wrists and palms, the groins, hams, and soles are therefore almost always unaffected both to the sight and touch.'

The following points in the history of prurigo are worthy of notice.

(1) Prurigo is not congenital, but generally first appears during infancy, sometimes in the form of wheals, like urti-

caria, at other times as a slight papular eruption. It commonly begins on the legs, and becomes more severe as age advances.

(2) It is almost exclusively confined to badly nourished children of the poorest classes.

(3) The disease is aggravated during the cold weather and relieved during the summer.

(4) In its severe forms it is incurable.

Differential diagnosis.—Prurigo may be confounded with scabies, phthiriasis, eczema, and pruritus. Perhaps it is more liable to be mistaken for chronic scabies than for any other disease, especially when the skin has been extensively affected so that the burrows cannot be found. But an important point of distinction is that prurigo especially attacks the extensor aspects of the legs, seldom the flexures of the joints, and never the skin of the penis or scrotum, while in scabies of long standing these regions never escape. In phthiriasis the follicles of the skin become enlarged into the form of papules, and the tops of these get torn off by scratching, so that a little crust of dry blood is formed. In chronic cases the skin, too, may become dark and pigmented, but these changes must not be confounded with those of true prurigo; phthiriasis never attacks the hands, and the presence of pediculi on the skin or underclothing of the sufferer is sufficient for the purpose of differential diagnosis. Prurigo of long standing is often masked by eczema, and then the diagnosis may be difficult until the eczema is cured. The isolated papules of prurigo, with their bleeding heads and the generally pale and unhealthy appearance of the skin, can scarcely be mistaken for papular eczema, in which the papules are always clustered in great numbers and of a bright red colour, while the whole aspect of the skin around is of a red or pinkish hue. Lastly, prurigo must not be confounded with pruritus. The former is a well-defined papular eruption, the latter simply a state of itching, which may be due to many different causes, as, for example, to senile changes (*pruritus senilis*), to chronic urticaria, to the presence of bile in the skin, to reflex nervous action, as from uterine, stomach or intestinal irritation, or as a sequela of eczema or scabies, in which the pruritus often continues long after all eruption has disappeared. In all these cases the skin is severely scratched, but the scratching, though it may leave marks, still fails to produce a distinct development of the *pale papules* of prurigo.

The foregoing description of the disease is chiefly taken from Hebra's writings. I propose to add a few remarks of my own on its clinical features, as I have met with it in this country. The malady has hardly received the attention and recognition that it merits from English observers. Some modern writers deny altogether its existence in England. There can be little doubt that by many the disease is not recognised from Hebra's description, and indeed this is scarcely to be wondered at. On referring to his account of the disease, we find 'in every case the earliest appearance is that of subepidermic papules as big as hemp seeds, discovered rather by touch than sight, since they rise but little above the level of the skin, and do not differ at all from it in colour; they are always isolated, and though they appear in all sorts of places, constantly leave some regions unaffected.' Elsewhere he says that these papules are really deep-seated vesicles 'formed by a collection of fluid in the deeper layers of the epidermis.' Now, English observers have naturally laid considerable stress on this part of Hebra's description; they have constantly looked for, but generally failed to find, these large, papule-like vesicles *of the same colour as the surrounding skin*, and hence they have often come to the conclusion that the disease does not exist in this country.

There are several reasons why we often fail to find what I may call the typical eruption of prurigo. (1) The papules he describes (they have not at all the appearance of vesicles) exist as such only for a very short time, and they are quickly injured by the scratching of the patient; this fact, together with the constant presence of excoriations, eczema and other changes in the skin, makes it difficult to find them. (2) The large papules, though pale, are not always of the same colour as the surrounding skin, but often of a distinctly redder tint. (3) Hebra has, for the purpose of diagnosis, laid too much stress on the elementary form of the eruption, and not enough, by comparison, on the history of the disease which is, after all, a more important diagnostic feature. With regard to the *prurigo papule* I would remark that in elderly people, who have suffered perhaps for many years from chronic eczema of the ordinary kind, we notice that towards the later part of life the eruption often assumes a papular form, and we have, instead of common eczema, a development of large pruriginous papules on the extensor sides of the limbs; these papules are torn and bleeding from the scratching of the sufferer, and present a superficial appearance closely resembling Hebra's prurigo, but with a different history; this modified form of papular eczema is still called prurigo by some writers. But to return. Hebra says that prurigo is not congenital, but commonly appears during infancy. Now it is true that, strictly speaking, it is not congenital; at the same time it always appears at a *very early age*, generally during the first or second year of life, and this fact I regard as one of the most constant and characteristic features of the disease. I have never met with a single example of its appearance *for the first time* in an adult, but when once developed it persists through life.

Two cases of this disease have lately been under my care at the Middlesex Hospital, and serve well to illustrate the leading features of the malady. One was in a boy aged about twelve, and the other in a young adult. In the latter case the history and features of the disease were highly characteristic. The eruption had existed from infancy, and had, in spite of all treatment, slowly increased, though varying in severity with the changes of season. It was scattered more or less over the body, but its chief seat was the back of the wrist, arms, thighs and legs, the latter being very severely affected; the hams, however, were almost entirely free from eruption, so also was the space on the flexor aspect of the elbow joint; the head and neck were also quite free. The itching, always severe, was described as at times intolerable; the skin of the legs and thighs, which was abnormally dark, was thickened especially on the outer aspect of the limb, and so hard that it was somewhat difficult to pinch it up between the finger and thumb. On passing the hand quickly over the leg, the harsh, rasp-like character of the skin was very apparent; the lymphatic glands were enlarged, especially those at the upper part of the thighs. The general appearance of the eruption on the legs was just such as might be produced by severe persistent phthiriasis leading to chronic, dry, papular eczema, excoriations, dark pigmentation and thickening of the skin, but of course differing in respect to the parts affected. On a careful examination it was not difficult to find some of the isolated, pale papules of Hebra, but at this stage of the disease (over twenty years' standing) they were for the most part not isolated, and therefore not recognised. In this case all the leading characters of the disease were present: (1) its development in early infancy, (2) its persistence throughout life, (3) the especial development of the eruption on the lower extremities, with the freedom of the ham, (4) the intolerable itching with the consequent scratching, leading to excoriation, secondary eczema, thickening and pigmentation of the skin, and enlargement of the lymphatic glands.

With regard to treatment, some decided relief was given, of course only temporary, by full doses of arsenic, and soothing local applications.

Since writing the above, I have met with another case in a lad aged about fourteen. I am in the habit of seeing yearly (including hospital and private practice) above 2,000 new cases of skin disease, and I seldom pass a year without meeting with one or two cases of Hebra's prurigo amongst my hospital patients, but I have only met with one case in private practice. The fact is, it practically exists only amongst the poor of our towns, and is even there a rare disease.

Reference to Plates.

Hebra's Atlas, Heft v. Tafel 6 and 7; Fox's Atlas, plate 41; Cazenave's Atlas, plate 56 (not good).

RELAPSING PRURIGO.

Syn. *Prurigo Adolescentium.—Prurigo Æstivalis.*

We are indebted to Mr. Hutchinson for first calling our attention to this disease. The affection usually appears about the age of *puberty*, and has a marked tendency to *relapse* or to continue with but slight intermission for many years in spite of all treatment; these facts have suggested the names by which it is known. The disease attacks the face, neck, and upper extremities, occasionally also the trunk, whilst the lower limbs almost always escape. The eruption, which bears a strong superficial resemblance to acne, consists of 'small red papules, which look as if they were about to form pustules, but never do so;' that is, they never do to any considerable extent; though we occasionally find a little pus in the centre of some, they are, in fact, abortive pustules; together with the papular element there is more or less erythematous rash, especially on the face. The eruption is apt to leave small, white, very shallow cicatrices, and is attended with more or less pruritus, but not of a very severe type.

The disease differs from Hebra's *prurigo* (1) in the appearance of the eruption; (2) the itching is much less than in true prurigo; (3) the lower extremities are seldom, while the face is always, affected; (4) the malady is worse in summer than in winter; (5) it does not lead to that peculiar hardness of the skin which is one of the most striking features in Hebra's prurigo. On the other hand, it resembles prurigo in its obstinate character, and in the fact that it spares those parts of the skin that are also exempt from that disease, as, for example, the flexures of the joints, and the soles and palms. The disease is perhaps more likely to be mistaken for some peculiar variety of *acne* than for any other disease. The name '*prurigo*' as applied to this disease is open to criticism, and Mr. Hutchison himself does not regard it as especially appropriate.

Reference to Plates.

Syd. Soc.'s Atlas, plate 38.

Group 5.—PSORIASIS.

PSORIASIS.

Syn. *Lepra, Alphos, Leuce, Dry Tetter, Dartre Squameuse.*

A word of explanation is required on the nomenclature of this disease. Willan used the term *lepra* for an affection of the skin which we now know is identical with psoriasis, and thus those who followed Willan have naturally employed the two names synonymously. On the other hand the Germans, and some English writers, apply the term *lepra* to a very different disease, namely to true *leprosy* or *elephantiasis græcorum.* Hence arises at present some confusion in our nomenclature.

Symptoms.—Psoriasis is a disease characterised by an inflammatory overgrowth of the epithelial layers of the skin, and usually appears as dry roundish patches of pearly-white scales on a reddened and more or less elevated base. The accumulation of scales is often considerable, but varies with the age of the patch; the more recent patches are always the most scaly. The forms of these patches have given rise to many descriptive names, but they must not be regarded as implying so many different varieties of the disease, but only as indicative of the varying forms the eruption assumes during its progress; the names are so far useful in that they serve to remind the student of the changes and variations he may expect to meet with in practice. Thus in *psoriasis guttata* the spots are small and round, and are often compared to drops of mortar spattered on the skin. It will be remembered that patches of psoriasis have a tendency to *spread at the circumference* and *heal in the centre,* and therefore the spots of *psoriasis guttata* may rapidly enlarge to *psoriasis nummularis,* and as a further change to the ringed stage or *psoriasis orbicularis.* The intersection of these rings and the complete healing of certain portions, or some less regular process, may produce *psoriasis gyrata.* Even in the large irregular patches (*psoriasis diffusa*) the outline of the circumference is more or less rounded, a point of some little importance in the differential diagnosis of psoriasis of the scalp from some other scaly conditions. The healing process which begins in the centre of each patch, thus converting it into a ring, is very characteristic of the disease. The parts of the body especially liable to be affected, are the *points of the elbows* and *the skin of the knees just below the patella*; this fact is of considerable diagnostic value, for whatever other parts are involved, these spots hardly ever escape, and in very mild cases they are the only ones affected. Simple psoriasis may attack, exceptionally, almost any part of the body, but it is not common on the penis, scrotum, and face, and almost unknown on the palms and soles. There is, however, a form of dry cracked eczema of these parts which is often miscalled psoriasis. The eruption of psoriasis has a tendency to arrange itself symmetrically, and is more common on the back and lumbar region than on the chest or abdomen, and on the extensor than on the flexor surface of the limbs.

There are two varieties of psoriasis which it is of practical importance to distinguish, because they require different modes of treatment; they are (1) the psoriasis of the constitutionally scrofulous, and (2) the psoriasis of the gouty; or, as we may call them for the sake of convenience, scrofulous psoriasis and gouty psoriasis.

These two varieties of the disease are not confined exclusively to scrofulous and gouty families, but they are far more common among them than in those families where there is no hereditary tendency to scrofula or gout respectively.

Diagnostic distinction.—Scrofulous psoriasis is the more typical form of the disease, and the following are the chief points of difference between the two varieties:—

Scrofulous Psoriasis	Gouty Psoriasis
1. Usually first appears at the age of puberty, or earlier.	1. Usually first appears after the age of twenty.
2. The complexion of those affected is a clear pink and white, 'healthy looking.'	2. Complexion not remarkable.
3. Itching very slight and only when it first appears.	3. Itching considerable, and often lasting throughout the whole course.
4. History of scrofula or allied disease in the family.	4. History of gout in the family or in the individual.
5. Scales thick and apt to get piled up.	5. Accumulation of scales not very great.
6. Yields most readily to treatment by cod-liver oil and tonics with arsenic, and the inunction of cod-liver oil or tar. Sea air is always useful.	6. Yields best to colchicum, combined with alkalies and arsenic, and the local application of mild preparations of tar. Sea air often aggravates it.

Anatomically these two varieties are identical, and it is only in their general features that they differ. Gouty psoriasis is clinically nearly allied to dry scaly eczema, but differs from it in its morbid anatomy and in the parts especially liable to be attacked, as also in the fact that in no case does it give rise to a serous discharge.

Differential diagnosis between *psoriasis* and (1) *seborrhœa;* (2) *ichthyosis;* (3) *eczema squamosum;* (4) *pityriasis rubra,* (5) *lupus erythematosus;* (6) *tinea tonsurans;* (7) *lichen planus;* (8) *squamous dermato-syphilis.*

1. *Seborrhœa* of the scalp is apt to form greasy crusts and scales over *pale* skin,—*psoriasis,* white scales over red skin. Seborrhœa is often confined to the *hairy* scalp; psoriasis on the other hand always presents a *rounded border,* so that the edge forms parts of circles *which extend on to the forehead or neck*: the elbows or knees will often be also affected in the latter disease.

2. *Ichthyosis* or *xeroderma always first shows itself in infancy, psoriasis never. Ichthyosis* is quite unattended with any signs of inflammation or irritation, and the skin is everywhere harsh and dry; but in psoriasis, the skin between the patches is perfectly soft, moist and healthy-looking. The scales in the latter disease are of a *silvery white,* and in ichthyosis they are of a *brown* or *dirty hue.*

3. *Eczema squamosum* is more likely than any other disease to be mistaken for psoriasis. (1) In the former, however, besides the dry psoriasis-like patches, we generally find others, that *either are,* or *have been, moist and discharging.* (2) Eczema does not generally attack the point of the elbow or the extensor aspect of the knee. (3) The accumulation of scales in squamous eczema is not as great as in psoriasis, and the thickening is chiefly at the centre of the patch, in psoriasis at the circumference; in eczema, the scales are not generally silvery white, nor on a raised base. (4) The itching in dry eczema is, as a rule, greater than in

psoriasis. (5) The history; former attacks of moist eczema will be in favour of a return of eczema.

4. *Pityriasis rubra* may be distinguished by the *severity* of the disease, and the *excessive exfoliation of cuticle.* The epidermic layers do not accumulate as in psoriasis, but peel off in flakes, sometimes as large as the palm of the hand, leaving the skin underneath intensely red and tender. The scales are not situated on a *raised base* as in psoriasis.

5. *Lupus erythematosus* usually occurs on the face, especially on the eyebrows, cheeks, and ears; psoriasis never on the face alone. In the former disease the scales, when present, adhere very firmly, and when removed, little processes which dip into the follicles are seen on their under surface. *Lupus erythematosus* is usually attended with some pain, and the *destruction of tissue may be seen going on in the true skin.* Lastly, *Erythematous lupus* is essentially a disease of adult life, and rare before the age of thirty.

6. *Tinea tonsurans* sometimes leads to a scaly condition of scalp, which might possibly be mistaken for psoriasis, but in ringworm the hairs are always affected, in psoriasis hardly ever, and the scaliness is much less in tinea than in psoriasis. The history of the case is also a valuable guide to diagnosis.

7. *Lichen planus.* Old confluent patches of lichen may be easily mistaken for psoriasis, but the converse is not true; it is not likely that psoriasis should be mistaken for *Lichen planus.* The latter does not attack the same regions as psoriasis, and a careful examination of the margin of the patch will generally show a few isolated papules of lichen which are quite characteristic.

8. *Squamous dermatosyphilis* or *syphilitic psoriasis* may be distinguished from simple psoriasis by the presence of some other signs of syphilis, or by the co-existence of a different kind of syphilitic eruption on some other part of the body; in other words, a careful examination of the body will reveal some spot in which the eruption differs from simple psoriasis; there is also more coppery pigment deve-

loped in the syphilitic eruption. In addition to these we have the following minor points: (1) That syphilitic scales are more adherent and less silvery white. (2) In *syphilitic psoriasis* the eruption does not appear with so much certainty on the elbows and knees, and the palms and soles are often affected, hardly ever in simple psoriasis. (3) The fact that the patient has had previous attacks at an *early age*, will be in favour of simple psoriasis. But in spite of all care, the differential diagnosis is sometimes difficult. The beginner must be on his guard against mistaking the brown patches of pigmentation that are often left after simple psoriasis, for syphilitic spots.

Etiology.—If we refer to writers on the etiology of psoriasis, we find a vast number of different causes mentioned as giving rise to it, such as variation of temperature, habits of life, disorders of menstruation, mental emotions, local irritation and many others; now without denying the possible effect of some of these as exciting causes, I will venture to say that in the great majority of cases no exciting cause whatever can be found. Their supposed number and variety should at once make us mistrust their active agency. We know well that local irritation is a common exciting cause of eczema, but this is very rarely the case with psoriasis. The nearest approach to anything of the kind I have met with was in a lad who came under my care with a copious eruption of varicella, and before this had disappeared a well-marked spot of psoriasis formed round each varicella pimple, the little depression produced by the varicella being for a long time visible in the centre of each psoriasis spot. The lad had had one previous attack of psoriasis, but when the varicella appeared he was and had been for some time entirely free; the psoriasis occurred around *every varicella spot and there only.* I attributed this development to the local irritation of the varicella, but it may have been due to some other more obscure cause; in any case it was remarkable. There is one, and only one, well-established cause for psoriasis, and that is *hereditary transmission*. In some families this is strikingly marked, and, as I have before indicated, it is in many instances associated with a scrofulous or gouty constitution, but there are also a large number of cases in which no constitutional defect is present. Psoriasis scarcely ever appears during the first year of life, and is rare before the fifth year; in this respect it contrasts remarkably with eczema.

Treatment.—After what I have said as to the origin of psoriasis, it is almost unnecessary to add that no treatment can prevent the recurrence of the disease; we cannot, in fact, change the constitution of our patient by the administration of drugs. Natural changes of a favourable kind no doubt sometimes occur, and those who have been tormented with psoriasis while young may altogether lose it with advancing years; this is not generally the case, however, when it appears for the first time in middle life, and is of the kind I call 'gouty.' Bearing these facts in mind, it is clear that to continue the administration of drugs (after the eruption has disappeared) with a view to prevent a return of the malady, would be most unwise.

I have already pointed out that there are two varieties of psoriasis, and that they require a somewhat different mode of treatment. For the present my remarks apply exclusively to common typical psoriasis, such as we often see in young people, and which is usually attended with very little irritation and itching. It is admitted by all that the disease is difficult to remove, and that a permanent cure can hardly be expected.

General treatment.—Of all the many remedies that have been recommended for psoriasis, arsenic is by far the most important; it will be well therefore to mention here one or two practical points in connection with the administration of arsenic. The best preparation of arsenic is the liquor arsenicalis, or if an acid preparation is required, the liquor arsenici hydrochloratis; these should be administered in some aromatic or bitter infusion three times a day, *directly after the three principal meals.* In children, liquor arsenicalis may be conveniently given with a little liquor potassæ, syrup and water, the essential point in all cases being that it be taken on a full stomach, for then it is much less likely to disagree than when taken on an empty one. In determining the dose of liquor arsenicalis, it is well first to consider what it is we want to produce, namely, an active change in the nutrition of the skin; now arsenic is an excellent tonic for children in very small doses (♏ j), and we often use it simply as such in the treatment of scrofula and eczema; but when we have to deal with psoriasis we want to produce a more marked and specific effect, and hence larger doses must be given. It is always better to begin the treatment with moderate doses in order to test our patient's ability to bear the remedy, and then to increase the dose quickly to the full amount, which should vary according to circumstances and the age of the patient. In children over three years of age, from three to five minims, and for adults from five to ten minims, three times a day would be a full dose. After considerable experience, I have never seen the slightest permanent ill effect produced by arsenic when properly administered. No doubt it disagrees with some people, and in that case should be given in very small doses, or discontinued altogether. If it produces slight diarrhœa, a little opium may be added to the medicine with advantage. Slight irritation of the conjunctiva does not indicate the necessity of discontinuing the arsenical treatment; if this, however, is accompanied by puffiness of the face, the dose may be diminished, and it should be altogether left off for a time when it causes much nausea or pains in the stomach. If nervous symptoms are produced, such as a sensation of numbness in the feet and hands, the dose of arsenic must be diminished. It must always be borne in mind that the effect of arsenic in producing nervous symptoms and disturbing the digestion is much more marked in some individuals than others, and therefore a patient should never be allowed to continue the treatment without being seen at regular intervals by his medical attendant.

Many years ago I published a short account of the result of treating a considerable number of obstinate cases of psoriasis by the internal administration of carbolic acid. My trial of this remedy was moderately successful, and ever since that time (about fourteen years ago) I have continued to use carbolic acid pills (51) in cases where arsenic fails or is otherwise inadmissible, and I have seen no reason to change my opinion that it is a remedy of some value. Tar capsules and tar water are also medicines that may be tried when other means fail, but they are more disagreeable than carbolic acid pills (51). The internal administration of carbolic acid and tar appears to me to be more useful in the gouty form of psoriasis than in any other.

Local treatment of psoriasis.—The local treatment of psoriasis is of quite as much importance as the constitutional; and as the action of local remedies on this eruption is often misunderstood, it will be well to say a few words on the subject. In the first place, I may say that there is no specific local remedy; all effective treatment consists in stimulating the skin to such an extent as to alter the nutrition of the part. In most cases this stimulation must be carried to the verge of active inflammation in order to produce the desired effect, and no matter what application we use, the process is exactly the same. The whole difference consists in this, that applications which are strong enough to set up this change in some persons, are almost inert when applied to others. In some instances, for example, sulphur ointment is strong enough to produce the desired effect, while in others strong chrysophanic acid ointment is required to set up the proper amount of stimulation. It is not that chrysophanic acid is any more a specific than sulphur or tar, but simply that it produces a more rapid and active change. In short, it matters not what remedy we use, so long as it gives rise to the required amount of stimulation, and our choice must therefore be guided by the circumstances of each individual case. Now there are two local stimulants which we find in practice are especially suitable for producing the effect I have above indicated, namely, tar and chrysophanic acid (or Goa powder, which contains about 80 per cent. of this acid). Unfortunately, both these remedies are very disagreeable to patients, and many of them say, as Lord Palmerston said of the gout, that they rather prefer the disease to the remedy. As, however, some of the disagreeable properties of these drugs may be diminished by a little management, I will point out what I find in practice is the best mode of procedure. With regard to preparations of tar, which are less objected to than chrysophanic ointment (37), I would say that the alcoholic solutions painted on once or twice a day with a camel's hair brush cause much less annoyance than tar ointments, and produce an equally good result; they dry pretty quickly and are attended with less smell than the ointments; moreover, they do not easily rub off on to the clothes. The liquor carbonis detergens is a convenient form in which to apply the tar, or an alcoholic solution of the oleum rusci of any required strength may be used. Chrysophanic acid is a more active remedy than tar, and it is always advisable to explain fully to the patient, before ordering it, its objectionable properties; namely (1) that it often sets up a good deal of inflammation, though not of a serious kind; and (2) that it stains everything with which it is brought into contact, such as cloths, skin and hair. Having then ascertained that, in spite of its drawbacks, the patient is willing to try it, the best plan of proceeding is the following; direct that the ointment be used only over a limited area at one time, say, for example, one leg. The ointment should be rubbed on once or twice a day, and the skin covered with rags and a bandage; by this means the staining of the clothes is prevented, and the ointment is kept in close contact with the skin. When psoriasis is confined to the arms and legs, as it often is, this plan answers well. The limiting the application to a comparatively small area has several advantages: (1) we are able to judge of its effect, and can easily increase or diminish the strength of the ointment as the occasion requires; (2) the patient soon sees an improvement in the part treated by comparing it with the opposite limb, and is thus greatly encouraged to persevere; (3) if active inflammation is set up it is limited to a comparatively small space. Chrysophanic acid should only be used in chronic cases, and when there is little or no irritation of the skin. As to the strength of the ointment, it is well to use a weak preparation at first (℈j ad ℥j), and quickly increase its strength if the patient bears it well; it is seldom necessary to use more than ʒj to the ℥j. As I have already stated, the use of tar or chrysophanic acid is particularly suitable when the eruption is confined to the extremities. When psoriasis covers the trunk or is nearly universal, the safest treatment is by alkaline warm baths. All that is necessary for this purpose is that two or three ounces of carbonate of potash be dissolved in the water of a full-sized long bath (2) in which the patient can be completely immersed. The chief objection to the use of baths for this purpose is the length of time required to carry out the treatment; it is of little use for the patient to spend a quarter or half an hour in the bath; an hour or an hour and a half daily, at least, is required to produce any decided effect. The most convenient time for taking the bath is shortly before going to bed, so as to avoid dressing. The temperature of the bath should be about the same as, or a little less than, that of the body, 90° to 98°, and hot water may be added from time to time so as to keep it tolerably uniform, but it may be varied a little according to the feelings of the patient. There is no objection to the use of a cold douche on coming out of the bath if the patient desires it; the skin should then be well rubbed, and when quite dry anointed with a little pure vaseline, which should be thoroughly applied with the hand all over the body, and then, if necessary, lightly wiped off with a piece of lint, sufficient being left on to soften the skin. This plan, if perseveringly followed, almost always succeeds in effecting a cure, and the process, though rather tedious, is not disagreeable.

Another plan of dealing with psoriasis is by what is called Hebra's soft soap method (Sydenham Society, vol. ii. p. 38). He says: 'In a case of *psoriasis diffusa inveterata*, in which the whole surface of the body is affected, I have soap rubbed in twice a day, in a quantity which varies with the age and size, and also with the susceptibility of the patient, but which is generally from two to four ounces daily. Young women in whom the skin is delicate, and contains but little pigment, naturally require a smaller amount than strong heavy adults, whose epidermis is of a dark colour. It is, however, essential that the soap should be firmly rubbed into each individual patch of psoriasis by means of a piece of flannel and a brush, till the accumulated masses of epidermis are removed, and a little blood is seen to ooze from the red base which has thus been exposed. To diminish the painfulness of this procedure, the body should be divided into regions, and a different region should be especially attended to each time the soap is used. For instance, on the first occasion, some particular part, such as the right arm and forearm, should be rubbed forcibly till it bleeds, while the remedy is only applied gently to the rest of the body. Next time, on the other hand, the more energetic friction may be limited to the left upper limb and so on, until, at the end of six or eight days, every part of the cutaneous surface has been rubbed in such a way as to produce slight bleeding. Within the period named then, according to the severity and extent of the affection, the frictions are completed, but the patient must not be permitted to take a bath or to give up lying in the blankets impregnated with soap. In this he must still remain for at least three or four days after the rubbing is discontinued, in fact leaving it only when extensive desquamation has commenced, so that the whole cuticle is peeling off in large lamellæ. Moreover, until this takes place, he must not be allowed to take a bath, to change his bed and body linen, or to dress himself. It is, however, in but few cases that even this energetic course of treatment effects the result aimed at, a cure of the psoriasis; but the repeated employment of the same treatment . . . will nevertheless often be successful.' This method of Hebra's is pretty severe, and is not likely to be generally adopted. To a limited extent I have often found it useful; for example, in dealing with psoriasis of the scalp, the free use of soft soap or spirits of soap is very beneficial; it may be followed up by the application of liquor carbonis detergens, or the white or red precipitate ointment, diluted with vaseline. Again, in dealing with chronic spots about the elbows and knees, soft soap spread as a plaister on pieces of flannel and kept in position by a bandage removes the thick outer cuticle; subsequently the spot should be daily painted with an alcoholic solution of tar. In some cases of local psoriasis, Martin's elastic bandages and other forms of closely fitting india-rubber coverings are applicable as a means of cure, especially when the eruption is of the irritable variety.

Treatment of gouty psoriasis.—I propose now to say a few words on that form of psoriasis which is usually attended with much itching, and occurs for the most part, but not exclusively, in gouty people. With regard to *general* treatment, the point to be aimed at is to find out, if possible, any defect in the secretions, or in the digestion or assimilation of food, and if possible to correct it. But in the absence of any special indication for treatment, Fowler's solution, combined with small doses of colchicum and iodide of pôtassium, will be found the most generally useful medicine. Irritable psoriasis will not bear the vigorous local treatment which is suitable for the ordinary kind. Tars and stimulating ointments must be applied with caution, and in a diluted form. The treatment by means of alkaline baths above described is very suitable. The diet of the patient should not, in these cases, be neglected, and the most appropriate is that which is usually ordered for gouty people. Whatever plan we adopt in dealing with this troublesome affection, a certain number of cases will defy our best efforts to bring about a cure.

REFERENCE TO PLATES.

Psoriasis. Syd. Soc.'s Atlas, plates 14 and 17; Fox's Atlas, plates 33–36 (plate 37 *psoriasis palmaris* is a form of dry cracked eczema of the palm); Hebra's Atlas, Heft iii. Tafel 4, 5, and 6; Cazenave's Atlas, plates 17, 18, 19, and 20.

GROUP 6.—FURUNCULAR GROUP.

Furunculus—Anthrax—Aleppo bouton.

Furunculus or common boil hardly requires a special notice. It consists of a circumscribed inflammation of the true skin or subcutaneous connective tissue forming a hard, painful, though small tumour. Sooner or later, suppuration of the central portion occurs, the swelling becomes more conical, and a little pus or a small slough or 'core' is discharged. When the inflammation is of a very sluggish kind, no free discharge occurs, and a blind boil is produced.

The diagnosis of furuncle is easy; it differs from anthrax or carbuncle chiefly in its smaller size, rounded shape, and in having a single point of suppuration, whereas in carbuncle this is always multiple, so that several openings discharging pus are formed. Again, boils seldom occur singly, while carbuncle is almost always solitary.

Etiology.—The cause of boils cannot in all cases be determined; their production is, however, promoted by anything that tends to lower the system or produce malassimilation of food. Amongst the most common causes must be mentioned an unsuitable diet, as, for example, one consisting too exclusively of animal food, and more especially of food that has been kept too long or is otherwise unsound. The diet and violent exercise recommended by injudicious trainers will often induce boils, and in hydropathic establishments the sudden cessation of the use of alcoholic stimulants by those accustomed to them not unfrequently produces a like result. Again, the absorption of animal poison may be followed by boils; this is often seen in the dissecting and post-mortem rooms.

Treatment.—In the treatment of boils it is of the first importance to secure a simple but nutritious diet, including a fair supply of well-cooked green vegetables, as well as a moderate quantity of alcohol in the form of sound wine or weak spirit and water; but in very severe cases, a large quantity of alcohol may be required, which should be given at regular intervals during the twenty-four hours. In a large proportion of cases the administration of twenty minim doses of liquor potassæ with the liquid extract and infusion of cinchona will be found very beneficial. A tablespoonful of German yeast taken on an empty stomach three times a day, has sometimes a specific effect in arresting the formation of boils, but in mild cases this remedy would be worse than the disease. A simple purgative is occasionally required. If the ordinary treatment is unsuccessful, recourse must be had to change of air to the seaside, and warm sea baths, which seldom fail to produce the desired effect.

Local treatment.—A boil, directly it appears, should be covered with collodion, the application being repeated as often as necessary. This plan often arrests the growth of the furunculus. When a boil is fully established or of large size, a linseed meal poultice to which some olive oil has been added, should be applied and frequently changed, the skin being fomented from time to time with very hot water. It is important that the poultice should be diminished in size as the tissues around the boil become less inflamed, so that the neighbouring healthy skin may not be kept in a sodden state. Of all specific local applications, belladonna is the most useful; it may be applied in the form of an ointment, or as a lotion under oil-silk. When boils, having discharged their contents, are sluggish and do not heal readily, it is well to use some stimulating remedy, such as unguentum resinæ, or a weak carbolic acid lotion.

Considerable pain is often produced by the pressure of the clothes on a boil; this may be greatly relieved and the progress of the boil promoted by applying a piece of thick soft plaister, such as the amadou plaister, with a hole cut in the centre after the manner of a corn plaister; this takes the pressure off the top of the boil where it is not wanted, and applies it to the circumference where it is wanted; the relief is often great. Two or three layers may be used if one is not thick enough.

ALEPPO BOUTON.

Syn. *Delhi boil. Biskra bouton.*

Some doubt exists as to the nature of this disease, which is met with in India, North Africa, Aleppo, Bagdad, and other Oriental towns. It is highly probable that more than one affection has been included under the name of 'Aleppo evil,' and a recent observer, M. Gaber, of Vienna, has expressed a belief that the malady is, in all cases, of syphilitic origin. His conclusions are not, however, generally accepted.

Symptoms.—The disease usually begins by the formation of a small red spot, in the centre of which a minute papule developes, having the general appearance of a mosquito bite; this gradually increases in size until it forms a kind of blind boil or tubercle on the top of which a crust forms, and subsequently, under this crust a chronic ulcer is developed, which is very indolent and difficult to heal; the scars that ultimately form are in some cases well-marked, in others scarcely perceptible. The eruption chiefly appears on the face, hands and legs. The affection runs a chronic course of about a year to eighteen months, and is said never to occur twice in the same individual.

GROUP 7.—ACNE, OR PIMPLY GROUP.

Acne—Sycosis—Acne rosacea.

ACNE.

Syn. *Varus. Ionthus.*

The derivation of the word *Acne* is doubtful; most writers refer it to acme, and believe that the disease was so named from its appearance in youth, or at the *acme* of life.

Some, however, derive it from *α* not and *κνέω* to itch. 'Gorræus, who wrote in the sixteenth century, says: Acne is a small hard papule in the face, called by the Greeks *ἴονθος*; by the Latins, *varus*. It is so called because it does not itch, and so does not make the patient scratch. Aëtius says, that *ἴονθος* and *ἀκνή* are the same.'[1]

Willan and Bateman notice four species of acne; namely, *A. simplex*, *A. punctata*, *A. indurata*, and *A. rosacea*. Of these the three first are identical, or rather, different degrees of the same disease, and differ from each other only in appearance and severity; the last, *A. rosacea*, is really a distinct malady, and will be discussed separately. *Acne simplex* is a mild form of the disease, differing nothing from *A. punctata*, except in this respect, that in the latter the black points of concreted matter plugging up the ducts of the sebaceous glands and follicles are more numerous and prominent. Both are included under the name *Acne vulgaris*. I shall briefly notice the characters of the following four varieties of acne: (1) *Acne vulgaris*; (2) *A. indurata*; (3) *A. varioliformis*; (4) *A. artificialis*.

(1) *Acne vulgaris* is a disease of youth, common between the ages of seventeen and twenty-five, rarely met with before puberty, and *never seen in young children*. It attacks chiefly the skin of the face, upper part of the back and shoulders, and occasionally other parts of the body, but never either the *soles* or *palms*. The eruption consists of scattered red or pale pimples in different stages of development, and varying in size from a pin's head to a large pea; each pimple, when fully developed, contains a small quantity of pus. In most cases we find interspersed between the inflamed pimples, a number of comedones (see *Comedo*), formed by the sebaceous glands over-filled with hardened secretion, and blackened at the opening of the duct by exposure and dirt. Some of these glands never inflame, but

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[1] See Hebra on Skin Diseases.

remain in *statu quo*, until their contents are removed by accidental pressure or friction. The seat of acne is the sebaceous gland, and the hair follicle into which it opens. The inflammation of the follicle is probably caused, in part at least, by the accumulation of sebum in the gland acting as a foreign body on the tissues around. As a consequence of this inflammation there is often a destruction of the gland and hair follicle, so that the future growth of hair is prevented, and small pitted scars are produced. The formation of tubercles simply depends on the character and extent of the inflammation. Acne, in a mild form, is attended with but little pain and no itching; in severe cases, however, the pain is considerable, and the disfigurement very great. It is not unfrequently complicated with seborrhœa, constituting the *Acne sebacea* of some writers. With regard to its comparative frequency in the two sexes, an opinion prevails that it is more common in women than in men, and assertions to this effect are made in many of the works on diseases of the skin. There is little foundation for this conclusion, the disease being equally common in both sexes. It is possible, however, that as mild acne is a disfigurement rather than an inconvenience, women are more anxious than men to be cured, and therefore present themselves for treatment in larger numbers. It cannot, however, be doubted that acne sometimes makes its appearance at each period of menstruation, and subsides during the intervals; in other instances, irregularity of the menstrual function is coincident with a crop of acne pimples on the face.

(2) *Acne indurata* is a severe variety in which the tubercles are large, indurated, and of a violet red or livid colour, and very painful. After the tubercles have disappeared, a purplish stain often remains for a considerable time. The disease is very chronic, and is attended with much disfigurement and scarring. The comparison of a severe case of *acne indurata* with a mild one of *acne simplex* might well lead to the belief that the diseases are distinct;

this, however, is contradicted by the history and morbid anatomy of the two varieties, and also by the fact that every shade of gradation exists between the two extremes.

The *acne scrofulosorum* of Hebra is a severe disease which is apt to affect the skin of the body generally, and is probably altogether distinct from true *acne.*

(3) *Acne varioliformis* is so called from its resemblance to variola. The name has been applied to more than one disease, but is now used to indicate a form of acne that occurs almost exclusively on the forehead and adjoining scalp. The pustules are pretty uniform in size, and flat-topped, they form crusts and leave deep scars like those of small-pox. This eruption is *generally mistaken for a syphilide* which it closely resembles; it may, however, be distinguished from the latter disease by its history, and tendency to recur in the same place without the appearance of any other eruption or symptom characteristic of syphilis.

(4) *Acne artificialis.*—The occasional production of an acne-like eruption from the use of certain drugs is well known. Amongst the most important of these is bromide of potassium, which in some individuals produces an inflammation of the sebaceous glands, and leads to the formation of an artificial acne, which differs, however, from true acne in the fact that the inflammation often extends over a continuous surface of skin, and forms dark or yellowish crusts quite unlike those of acne. Iodide of potassium has the credit of sometimes causing a similar eruption. In paralytic hospitals, this kind of acne from the use of bromides is not very uncommon. The continued application of tar to the skin induces an acneform inflammation, and Hebra remarks that workmen who live in an atmosphere strongly charged with tar vapours are very subject to it.

The *differential diagnosis* of *acne vulgaris* is generally very easy; the only diseases with which it can be confounded are *pustular dermato-syphilis* of the face, and the pimply variety of *acne rosacea.* From the latter it may be distinguished (1) by the absence of *itching and sensations of burning* which are always present to a marked extent in *acne rosacea*, and (2) by the colour of the pimples, which are pale red or livid in simple acne, but of a much brighter colour in *acne rosacea*, and scattered over a *reddened patch* of skin. Moreover simple acne is essentially an affection of young adult life, while *acne rosacea* is chiefly met with in women over thirty years of age. The history and general symptoms will usually serve to distinguish pustular *dermato-syphilis* of the face from acne. But apart from this, the most distinctive mark is the *presence of numerous comedones* in simple acne, which are generally absent in *dermato-syphilis.*

Treatment.—The foundation of all successful treatment of common acne depends on the promotion of a healthy action of the sebaceous glands, and the consequent prevention of comedones; therefore, all very soothing remedies, while they produce a temporary relief to the inflammatory symptoms, do not strike at the root of the malady. The basis of all treatment should be vigorous rubbing with soap and flannel, for friction with soap, more than anything else, prevents the formation of comedones, and consequently of the acne pimple. The following plan of treatment succeeds in a large number of cases: (1) The face should be steamed every night by holding it over a basin of hot water for a few minutes. (2) The skin should then be well rubbed for five or six minutes with soap and flannel, or a soft nail brush may be used with advantage when the skin will bear it; the soap should then be sponged off with warm water. (3) When the face has been dried, a lotion composed of two to three drachms of precipitated sulphur, two drachms of glycerine, one ounce of spirits of wine, three ounces each of lime water and rose water (15), should be thoroughly applied and allowed to dry, and remain on all night. If the skin is greasy, the addition of some ether to the lotion is an advantage. Sometimes an ointment is more effective than a lotion; in that case, one drachm and a half of hyperchloride of sulphur, ten grains of carbonate of potash, ten drops of oil of bitter almonds, and one ounce of lard may be used; or three drachms of sulphur ointment and five drachms of vaseline will be found a very useful unguent. Whatever is used should be allowed to remain on all night, and washed off in the morning with warm oatmeal and water or weak gruel. If the skin becomes very tender under this treatment, it must be discontinued for one or two nights and then resumed. The most common cause of failure is want of perseverance, or timidity on the part of the patient or doctor, for a temporary increase in the redness and irritability of the skin often prevents the continuance of the most efficacious remedies.

The treatment I have here indicated will be generally successful in dealing with ordinary acne, but will fail in a certain proportion of inveterate cases. In these I find nothing so effectual as the application of potash soap in the form of a lotion (16) well rubbed on the skin every night. One ounce of soft soap, one ounce of rectified spirits of wine, and six ounces of rose water will generally be found of sufficient strength. The lotion should be applied with a piece of flannel, and vigorously rubbed on the skin for as long a time as is convenient, the longer the better, short of making the skin really sore. Then the lotion should be washed off, and one of the sulphur lotions applied and allowed to dry on. Sometimes after the vigorous use of soft soap, sulphur is not easily borne; in that case the following lotion may be used instead: prepared calamine powder and oxychloride of bismuth powder, two drachms of each, rectified spirits of wine half an ounce, glycerine one drachm, perchloride of mercury three grains, and rose water to eight ounces. The quantity of perchloride of mercury may be increased if necessary. The worst cases of acne will in time yield to the soft soap treatment.

With regard to general treatment of acne no rule can be laid down that shall be applicable to all cases. Any symptoms of dyspepsia or irregular menstruation may point to a rational plan of treatment, but in the absence of any indications of this kind we may hope to succeed by local means alone. It is not uncommon to find that people who suffer from acne are anæmic, or otherwise below the normal standard of health; in all such cases iron, either alone or combined with arsenic, will be found useful. In severe cases of acne, associated with chronic dyspepsia, the oxide of silver (one grain in a pill) given twice or three times a day is often beneficial. I find empirically that small doses (ten to fifteen minims) of the solution of perchloride of mercury, in combination with the tincture of the perchloride of iron or with cinchona, has a very good effect on many obstinate forms of the disease, even where there is not a possibility of syphilitic taint.

In nearly all cases the local treatment of acne must for a long time be more or less continuous, inasmuch as when left to itself the disease is apt to return, but instead of using the remedies every night it will be sufficient if they are applied once or twice a week.

Reference to Plates.

Acne vulgaris.	Syd. Soc.'s Atlas, plate 26; Fox's Atlas, plate 59.
Acne indurata.	Fox's Atlas, plate 60.

SYCOSIS.[1]

Syn. *Acne mentagra.*

Definition.—*Sycosis* is a non-contagious disease confined to adult males, and consists in a peculiar chronic inflammation of the follicles of the hairy parts of the face.

Symptoms.—Sycosis must be regarded as a rare disease. It usually begins on the chin or upper lip, where it is apt to occupy the central part. The first appearance is that of small, discrete, rounded papules or tubercles, like those of ordinary acne, with a hair passing through each. The tubercles are usually indolent, and for a time they may remain isolated, but commonly they become crowded together and form a more or less continuous, raised and infiltrated patch. The appearance presented differs according to the acuteness of the attack and other circumstances. Sometimes thick raised patches, like mucous tubercles, are produced, while at other times the infiltration and thickening is but slight. In all cases the patches are formed by the aggregation of solid tubercles or pustules, each of which is pierced by a hair. In most instances the hairs are not very easily extracted, unless the suppuration extends deep down into the follicle; but in cases of long standing, the inflammation may lead to a complete destruction of the sac, and the formation of permanent bald spots. The regions which are most commonly attacked by sycosis are the follicles of the beard, moustache and whiskers; more rarely, the eyebrows, eyelashes, and parts just within the nostrils; while it is not unknown on the pubes and the hairy tissues of the axillæ. It may be fairly doubted whether it ever attacks the hair follicles of the scalp, but a condition resembling it has been described by some writers. Hebra remarks: 'That when sycosis has existed for some time, the structures between the follicles become involved in the inflammatory change, as well as the follicles themselves. The connective tissue elements undergo proliferation, and this leads to the formation of a number of semi-globular condylomatous elevations, which may have somewhat the appearance of raspberries (*Frambœsia*). These, like the ordinary tubercles of the disease, are traversed by numerous hairs, and contain many points of suppuration which are discovered on applying pressure or on pulling out the hairs one by one. It was the peculiar appearance of these growths, resembling somewhat the granular inside of a fig, which led our forefathers to give to the disease the rather fanciful name of *Sycosis*.'

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[1] For parasitic sycosis see *Tinea tonsurans.*

In the diagnosis of sycosis the following points should be especially remembered: (1) The disease is confined to adult males. (2) It almost always attacks in the first instance the upper lip or chin. (3) It is strictly confined to the hairy parts. (4) The papules, tubercles or pustules always have hairs running through them. (5) It is a very chronic affection, lasting for many months or years, and leading to considerable thickening of the cutaneous structures. (6) The inflammation is attended with some pain and burning sensations, but little or no itching.

Differential diagnosis.—Sycosis may be easily confounded with pustular eczema of the chin, especially if the latter is confined to the hairy parts; when, however, the inflammation extends beyond these regions, the diagnosis is easy enough. In the absence of this certain guide, we must bear in mind that pustular eczema is attended with more itching and general inflammation, while the discharge and crusts are more abundant than in sycosis. In making the diagnosis, it is very important that any crusts that may have formed should be softened and removed, so that the condition of the skin itself may be examined, when the presence of any moist excoriated patches would be conclusive in favour of eczema.

The only other affection with which sycosis can be confounded is syphilis; but the strict limitation of the inflammation to certain spots, and the absence of all ulceration and other signs of specific disease are usually sufficient for the purposes of diagnosis.

Treatment.—The internal administration of arsenical preparations has sometimes a beneficial effect on this disease, but this is by no means always the case. There is only one way of curing sycosis with any degree of certainty, and that is by epilation. The best plan is as follows: all crusts must first be removed in the usual way by oil and poultices, the beard must be cut short with a pair of scissors, and wherever a yellow point is seen the hair must be pulled out with a pair of depilatory forceps. This is quite unattended with pain, for the hair comes out very easily with its sheath attached to it; when this has been done a sulphur ointment should be applied. For the first day or two the epilation should be confined to the parts most affected, and only those hairs extracted which run through pustules; afterwards, however, the diseased surface should be divided into a certain number of patches, one of which should every day be thoroughly epilated. The healthier the part, the more pain there is in removing the hair, and as the disease lessens the patience and perseverance of the patient will be taxed to the utmost. The young hairs which appear after the epilation should be removed until the skin is quite healthy, and after each removal the sulphur or yellow oxide of mercury ointment should be well rubbed into the surface. Perseverance in this plan of treatment invariably cures the disease, whereas if left to itself it may last for many years, and lead in the end to the total destruction of the hair and the formation of permanent cicatrices. The raspberry-like growths which sometimes occur in sycosis are best destroyed by the application of nitrate of silver. Doubts as to the advantages of epilation in sycosis have been expressed by some writers; but the fact is, no other treatment has much effect in curing the disease. It is true that forms of pustular eczema of the chin are often called sycosis, and these will sometimes yield to constitutional and mild local treatment, hence the error arises that epilation is unnecessary.

REFERENCE TO PLATES.

Sycosis. Fox's Atlas, plate 61; Cazenave's Atlas, plate 16.

ACNE ROSACEA.

Syn. *Gutta rosea. Couperose.*

Definition.—Acne rosacea may be defined as a chronic inflammation of the skin of the face, attended with burning sensations, and leading to persistent congestion and the formation of red pimples. In very chronic cases this may be followed by new vascular growth and an increase of the connective tissue.

Hebra, who uses the name *Acne rosacea*, and places the disease in juxtaposition to *Acne disseminata*, yet fully recognises the fact that the two diseases are perfectly distinct. He says: 'I admit indeed that they are sometimes seen together on the same patient, and that the presence of the one is perhaps favourable to the development of the other. But I am nevertheless convinced that these two so-called species of acne are entirely distinct diseases.'

There are two forms of *Acne rosacea*; (1) the non-hypertrophic, and (2) the hypertrophic form. The former, which is very common, is chiefly met with in women, and is attended with redness and a burning sensation of the skin. The latter, in which hypertrophy is a marked characteristic, is more common in men; and is often, though by no means always, the result of over-indulgence in alcohol.

Among the more characteristic features of the disease must be mentioned its limitation to the skin of the face. The parts most commonly affected are the nose, forehead, cheeks, and chin; occasionally it extends beyond these regions to the scalp or neck, but never to any other part of the body. In the non-hypertrophic kind, we meet with two varieties. The first consists of a bright red patch of an irregularly symmetrical form, involving the skin on both sides of the nose and often extending down to each cheek, so as to assume a somewhat butterfly shape; these patches are often quite smooth, with a tolerably well-defined margin, and the skin is very slightly swollen and tense. The redness, which may be removed by pressure of the finger, is due to chronic congestion, and is liable to great variations in its intensity from day to day, or even from hour to hour; for example, in some people it is increased almost suddenly by taking stimulating food or wine, or by exposure to a cold wind, at the same time the burning sensations are greatly aggravated; the extreme irritability and sudden congestion of the skin remind one strongly of certain forms of urticaria. In the first instance, the congestion is probably the result of faulty innervation, but after a time the vessels of the part may become permanently dilated, and then the affection assumes a chronic character; the sebaceous glands are apt to get over-stimulated, so that we have an excess of oily sebum poured out, which gives the skin a greasy appearance. The other variety of non-hypertrophic *Gutta rosea* is seen most commonly on the forehead or chin, especially the latter; it occurs under exactly similar circumstances to that above described, from which it differs chiefly in being associated with folliculitis, and a consequent development of numerous small and irritable pimples situated on the reddened patches of skin; these little pimples resemble simple acne in appearance, but are of a brighter red, and, unlike acne, they give rise to much itching and burning irritation. This pimply form of the affection is more liable to show itself in those who have a tendency to eczema, than in those who are the subjects of true acne. The subjective sensations of burning and tingling which are not met with in simple acne are always present in *Gutta rosea*, and often cause great annoyance to the patient.

The second, or *hypertrophic form* of this disease, may be regarded as a distinct affection from simple *Acne rosacea*. It is, as I have said, far more common in men than in women, and is generally confined to the nose or its immediate neighbourhood. Its characteristic feature is a great distension of the veins of the skin, so that they become strikingly visible to the naked eye. In some cases this alteration in the vascular tissue is the only apparent change, while in others, there is in addition a gradual increase in the fibrous tissue, so that the cutaneous structures become greatly hypertrophied, and the irregular formation and contraction of the new tissue gives to the nose a nodulated or hob-nailed appearance. On this subject, Hebra remarks: 'In some of these cases, the nose, without any increase in its breadth, will be elongated until it projects beyond the lips, and even down to the chin—reminding one of the turkey; while in other instances the organ will expand in every direction, until it attains the size of the two fists (*Pfund-Nase*). Even when the nose has reached so enormous a size as this, however, the skin is the only tissue affected, and the deeper structures entirely escape. In one case which came under my observation, the alæ of the nose were as large as the fists, and hung down so as to conceal the mouth; but the nostrils were nevertheless of the usual size, and the patient could take a pinch of snuff quite cleverly, when he had raised the affected parts with the other hand.'

The tendency to *Acne rosacea,* like many other skin affections, is slightly hereditary, but the exciting causes are, for the most part, different in the two sexes. (1) In women, derangement of the menstrual functions is the one most universally recognised, and in accordance with this view we find that the malady often appears for the first time either at puberty, or in middle life, when the menstrual functions are becoming irregular or are about to cease. It is, indeed, much more common at this latter period than at puberty. In some women *Gutta rosea* appears shortly before each menstruation, while in others it is associated with amenorrhœa; and I think there can be no doubt that in many cases it is aggravated by dyspepsia. (2) In men, the most common exciting cause of the disease is over-indulgence in alcohol; but nevertheless, not a few cases are met with in people of languid circulation, who have never taken wine or spirits in excess; the cause is, therefore, not always apparent.

Differential diagnosis.—The diagnosis of *Gutta rosea* is not usually difficult. The diseases with which it is most likely to be confounded are simple acne, erythematous lupus, and rosy syphilitic rashes on the face. It may be distinguished from simple acne by the red and inflamed condition of the skin between the pimples and by the attendant burning sensations; moreover, simple acne is not always confined to the skin of the face, and is always associated with comedones. From erythematous lupus it is distinguished by the absence of the closely adherent scales which are present in that affection; in lupus, there is moreover a loss of substance; this is not the case in *Gutta rosea.*

Treatment.—As I have already pointed out, the two principal types of *Acne rosacea* are practically distinct diseases, and as such require different modes of treatment. To begin with the more formidable malady, the *vascular hypertrophic form*; it is quite useless to treat this by means of palliatives, nothing short of very active measures will do any permanent good. With regard to general treatment, it is *essential* that the patient give up alcohol; otherwise, as fast as the condition of the nose is improved, all the work of improvement is undone by the perpetuation of the causes which first gave rise to the disease. Having once secured this essential on the part of the patient, the rest of the treatment is simple, and, as far as my experience goes, very successful. The digestion of the patient should be looked to and the bowels regulated, but it is on the local treatment that we mainly depend. The first part of this consists in dividing longitudinally the dilated veins, and allowing them to bleed freely; this is favoured by sponging with warm water. I formerly used a cataract knife for this purpose, but I now always employ a sharp ordinary lancet, which I find more convenient. The operation is attended with little pain. At first only the larger veins should be laid open; this is very easy; later on the smaller ones give a little more trouble, but after some practice they can be followed with great accuracy. The object to be attained by this proceeding is, of course, to obliterate the dilated veins, and formerly, with this object in view, I was in the habit of applying some caustic after the operation, but I find by experience that if the veins are well laid open this is quite unnecessary, and the pain of applying anything after the vessels are divided is thus avoided. In some very exceptional cases the caustic may be required. In a few sittings a very marked improvement may be produced in the appearance of a patient. The result of cutting off the vessels is twofold: (1) the nose at once becomes paler, smaller, and less unsightly, and (2) the hypertrophied condition of the skin gradually diminishes, and in mild cases disappears altogether. In the more severe forms, after having destroyed the vessels in the way above indicated, we must try to get rid of the hypertrophy by the application of caustics. The best caustic for this purpose is the saturated solution of potassa fusa in water (equal parts). This caustic is strong, but very manageable, and should be applied with care and judgment. In the milder cases the application of caustic is not required, but after the vessels have been destroyed a strong sulphur lotion should be used every night; this will often complete the cure.

Treatment of the pimply forms of Acne rosacea.—As I have already stated, the milder non-hypertrophic forms of *Acne rosacea* occur more frequently in women than in men, and they are very often associated either with (1) a weak digestion, or (2) with some irregularity of the menstrual function; these two facts must always be taken into consideration in the general treatment of the affection. The diet should be carefully regulated, and, as a rule, stimulants and coffee avoided, together with anything else that tends to aggravate the symptoms; regular exercise and proper rest should be insisted upon. With regard to medicines, those are the most useful which improve the powers of digestion and assimilation, such as carbonate of bismuth, with some bitter tonic infusion. The bowels should be regulated by an aloes pill or a mild sulphur laxative; the latter is generally preferable. In the local treatment (13) we must be guided partly by the condition of the skin. When this is very irritable, I find the best application is a thick bismuth and calamine lotion, either with or without a little perchloride of mercury, freely applied at night and more sparingly in the daytime, so as not to cause annoyance to the patient. In some cases the irritation is slight, and then a weak sulphur lotion at night often does good; at the same time a calamine and zinc lotion may be applied during the day. Occasionally the hypochloride of sulphur ointment (43) at night is very beneficial, but in most cases it is too irritating.

REFERENCE TO PLATES.

Acne rosacea. Cazenave's Atlas, plate 28 (good).

CHAPTER IV.

CLASS II.—*CUTANEOUS HÆMORRHAGES.*

Purpura simplex—Purpura hæmorrhagica—Scurvy—Purpura rheumatica.

THE highly vascular structure of the skin readily explains the frequent occurrence of cutaneous hæmorrhages, which are sometimes caused by very slight mechanical injuries, as well as by the pathological changes that occur in the course of different diseases. But whatever be the cause of the hæmorrhage, its seat is generally the same, namely the superficial vascular layer of the corium, and, more rarely, the hair follicles. The hæmorrhagic spots vary much in size; those that are small like flea-bites are called *petechiæ*, while to the larger ones the name *ecchymoses* is usually applied. For the most part the amount of blood extravasated is small and does not raise the cuticle perceptibly; but it may cover a considerable area, forming large spots of a red or purple colour, with an irregular margin. Under some exceptional circumstances, the cuticle is raised in the form of a blister, filled with blood; this may be produced mechanically, as when a small piece of skin is suddenly pinched with a pair of pincers, or struck between a hammer and some hard substance. The only difference in these cases is that in the latter the hæmorrhage is more superficial and profuse, so that the cuticle is bulged.

Ordinary hæmorrhagic spots on the skin possess the following characters:—

(1). They are persistent; the time of their duration depending in part on the amount and depth of the hæmorrhage, and in part on the activity of the absorbing process.

(2). They do not disappear or in any way alter under pressure of the finger, and are just as visible after death as during life.

(3). When once formed they do not increase in size, except by the occurrence of a fresh spot in the immediate neighbourhood.

(4). They appear rapidly, sometimes almost suddenly.

(5). Their colour, when first formed, varies from a bright red to a dark purple, the tint depending on the amount and depth of the hæmorrhage.

(6). They gradually disappear by absorption, going through a regular series of chromatic changes, from purple to various shades of paler colour, and finally to yellow, as we see exemplified in a common bruise.

The causes of cutaneous hæmorrhages are very various; for example, hæmorrhagic spots may be produced by mechanical injury to the vessels, as in the case of a bruise; indeed in some people the small vessels give way under such slight provocation as almost to constitute a disease in itself. The removal of atmospheric pressure by means of a cupping glass will readily produce a similar effect. More extensive hæmorrhage from mucous membrane may occur from a like cause in those who attain very high elevations in balloons or on mountains. Any undue pressure from within will, of course, tend to produce the same result as the removal of pressure from without; thus we have hæmorrhages occurring from any obstruction to the return of blood to the heart. The more frequent appearance of purpuric spots on the legs than on any other part of the body may be explained in a similar way, and is probably due to the action of gravity. Again, thrombosis or embolism in a small vessel of the skin may produce a hæmorrhagic spot. All the above-mentioned hæmorrhages are due to causes more or less mechanical, and are not symptomatic of any particular disease; under these circumstances they are called *idiopathic*.

Cutaneous hæmorrhages are not, however, confined to mechanical causes, for they often occur in the course of diseases, and may be *symptomatic* of certain conditions. For example, in some kinds of inflammation of the skin they are very common; as, for instance, in *erythema nodosum*. They may also occur in fevers, such as small-pox and typhus, while in *scurvy* and *purpura hæmorrhagica*, they constitute a chief feature of the disease. In all these general maladies it is probable that the condition of the blood itself plays an important part in the production of the hæmorrhage. The chief point to remember is, that the appearance of hæmorrhagic spots on the skin does not in itself *constitute a disease*.

Purpura simplex is characterised by the spontaneous development of petechiæ scattered over the body, and especially the lower limbs. The eruption is usually quite unattended with constitutional symptoms, but is generally believed to indicate a certain amount of debility; it is not associated with subjective sensations, and is always symmetrical. Purpura hæmorrhagica is a very severe and dangerous disease, but does not properly belong to affections of the skin.

In distinguishing purpura from scurvy, to ascertain the *cause* is of the *first importance*. The latter disease can always be traced to hardships and the absence of fresh meat, fruit, and vegetables, and it is readily amenable to treatment by proper diet and lemon juice. Purpura, on the other hand, never depends on the above-mentioned causes, and does not yield to treatment. The following additional points of distinction may be mentioned:—

(1). Scurvy does not usually appear in isolated cases; all those exposed to the unfavourable influences above indicated suffer from it more or less.

(2). Debility, want of energy, depression of spirits and pains in the limbs are always present as an early symptom in scurvy, while in purpura these symptoms are generally absent, especially at the commencement of the disease.

(3). In scurvy painful swellings and ulcerations are apt to occur, especially in the legs; these are not present in purpura.

(4). In *purpura hæmorrhagica* the bleeding is more general, copious and continuous than in scurvy.

RHEUMATIC PURPURA.

Rheumatic Purpura or *Peliosis Rheumatica* is a disease with fairly well-defined symptoms. Thus far, most observers are agreed; but they hold very different views as to its nature and affinities. By some it is regarded as a form of rheumatism, by others as a kind of purpura, and by a third class as a scorbutic affection. It is really, however, a variety of erythema, in which cutaneous hæmorrhages and joint affections are prominent features.

As early as 1829 Professor Schönlein described under the name *peliosis rheumatica* what he regarded as a new disease, characterised by an eruption of purpuric spots, accompanied by acute articular pains. Later on, Hebra (and others) also recognised this as a distinct disease, and his description of it corresponds pretty closely with that of Schönlein. He says that the disease begins with dragging pains in the joints and feverish symptoms, and that when dark red, livid or almost black spots appear on the skin, the rheumatic pains subside. He also mentions the fact that the disease is most frequent between the ages of twenty and thirty, and more common in men than in women. Fuchs and most of the other German writers on this subject regard the disease as allied to rheumatism, but yet sufficiently distinct to be considered as an independent malady, and at the same time not identical with either purpura or erythema. Wunderlich is, however, an exception to the rule, and looks upon the malady as simply a variety of purpura, and the articular pains as merely an epiphenomenon, while Dr. Kohn regards *peliosis rheumatica* as identical with *erythema nodosum*, and conjectures that in both cases the eruption is produced by embolism of the cutaneous capillaries.

The French writers, who have written largely on the subject of peliosis, are almost unanimous in regarding the disease as a variety of erythema nodosum. In 1858 MM. Legrand and Durian published a monograph on rheumatismal peliosis or rheumatismal erythema nodosum, in which, by an analysis of cases, they claim to show an identity as regards the etiology and symptoms of this disease with erythema nodosum. The peculiarities of the eruption as described by the Germans are regarded by them as hardly sufficient to constitute even a variety of erythema nodosum; in short, they consider the two diseases as absolutely identical. Bazin follows on the same side; he says, 'Enfin, en Allemagne, le Professeur Schönlein a donné, sous le nom de peliose rheumatismale, l'histoire de l'affection décrite en France sous le nom d'erythème noueux.'

In an able paper published in the 'American Archives of Dermatology,' 1875, Dr. Kinnicott points out what he believes are the differences between peliosis rheumatica and simple purpura, and says that the articular pains of the former must not be confounded with the muscular pains of the latter; also, that the hæmorrhages in peliosis rheumatica are all superficial, and do not occur in deep-seated tissues or mucous membranes as in the graver forms of purpura. As to the identity of peliosis rheumatica with erythema nodosum, he thus sums up his remarks: 'Are we not therefore justified in concluding that the only point of resemblance between the eruption of this affection and that of purpura rheumatica consists in an extravasation of blood, occurring, as we know, in various dermatoses, and a certain tendency to recurrence?' In the one disease there is true inflammation, in the other simple hæmorrhage. 'Aside from the cutaneous affections, do we find evidence of identity?' He considers that the absence of arthritic symptoms in many cases of erythema nodosum is an important point in favour of the non-identity of the two affections, as such symptoms are pathognomonic of peliosis rheumatica as recognised by the Germans. His final conclusions are briefly as follows: (1) That purpura rheumatica (Schönlein) is identified by the superficial character of the eruption, accompanied or followed by rheumatic symptoms and a marked tendency to recurrence, the disturbance of the general economy being, in uncomplicated cases, comparatively insignificant. (2) That these characters are sufficient for differentiation from different forms of purpura on the one hand and erythema nodosum on the other. (3) That we are compelled to accord the disease an independent and well-defined position.

Now no one doubts that arthritic symptoms are common in ordinary erythema nodosum. Speaking of this disease, Sir T. Watson says: 'Rayer has seen it occur in connection with acute rheumatism. So have I. A patient of mine was attacked with acute rheumatism of the joints immediately on the cessation of erythema nodosum. In another their order was reversed.' Trousseau, in his clinical lectures remarks: 'The articular pains which precede and accompany the eruption seem to me to be *characteristic of erythema nodosum.*' That cutaneous hæmorrhage commonly occurs in the swellings of erythema nodosum is admitted on all hands, and the fact that this affection is very apt to recur is also generally acknowledged. How then are we to draw a distinct line between erythema and purpura rheumatica?

Having had several cases of purpura rheumatica under my own care, and having also referred to very many recorded cases, I have been forced to the conclusion that many distinct diseases have been classed under this head, simply because they have been attended with cutaneous hæmorrhages and pains in the joints. Purpura is a *symptom* rather than a *disease*, and may and does occur in many severe maladies. Now, in order to judge fairly of a disease, it is necessary to examine it in its uncomplicated form; if it only occurs in the course of more serious affections, it must be regarded as an accidental complication rather than a well-defined disease.

Among the many recorded cases of rheumatic purpura, I find a certain small percentage of genuine scurvy, overlooked because the disease occurred under unusual circumstances and when scurvy was not to be expected. There is also a large number of cases recorded under the head of purpura rheumatica where the symptoms have been developed in the course of such grave diseases as advanced phthisis, empyema, kidney-disease, pyæmia, morbis cordis, &c., and I have myself met with cases of this kind; but in all these instances the purpuric spots and pains in the joints do not constitute a definite disease. Excluding, however, all these, there still remains a large number of recorded cases which are uncomplicated with serious organic changes, and which recover perfectly; these are the cases which cannot, in my opinion, be separated from the symmetrical forms of erythema (*erythema nodosum, tuberosum*, &c.). The symptoms in all are alike; there is a slight constitutional disturbance, articular pains, and sometimes redness and swelling about the joints, with purpuric spots on the skin, either with or without distinct patches of erythema. Usually within a few weeks or months all these symptoms disappear, and the patient is well. Between this not very uncommon affection and symmetrical erythema I can find no line of demarcation whatsoever.

REFERENCE TO PLATES.

'*Purpura thrombotica.*' Syd. Soc.'s Atlas, plate 39.

Purpura. Fox's Atlas, plate 43; Cazenave's Atlas, plates 48 (good) and 49.

'*Purpura urticans.*' Fox's Atlas, plate 44.

CHAPTER V.

CLASS III.—*DISEASES OF THE SKIN GLANDS.*

1. *Disorders of the Sebaceous Glands.*

Comedo—Milium—Steatorrhœa—Molluscum Contagiosum.

COMEDO AND MILIUM.

Definitions.—*Comedo* consists of a ***hair follicle*** distended by a small mass of inspissated sebum mixed with minute hairs. ***Milium*** is a very small sebaceous tumour, formed by the accumulation of altered sebaceous matter ***within the sebaceous gland.***

The hair follicles are tube-like depressions in the surface of the skin, with a somewhat dilated blind extremity. The outlet or duct of the follicle is funnel-shaped, and the wide part of the funnel opens on the surface of the skin giving passage to the hair shaft, and under ordinary circumstances allowing the free exit of sebum or any other material from the interior of the sac; below this short duct the follicle is a little constricted into a neck, and at this point the duct of the sebaceous gland usually opens obliquely. It will be seen therefore, that in consequence of the sheath closely embracing the hair at this point, there is very little space left for the exit of sebum, and hence that a comparatively slight obstruction or swelling would entirely prevent the escape of the contents of the follicle and the sebaceous matter. In other words, from the anatomy of the part, we can see how retained secretions may easily occur and thus give rise to a variety of cutaneous maladies.

The first of these that I shall notice is one in itself of little importance, and hardly to be regarded as pathological, but which occasionally gives rise to other and more serious affections. Comedones are small white plugs which are easily squeezed out of the hair follicles of the nose and forehead. The free ends of these little plugs become blackened by exposure and dirt, and are thus distinguished as dark dots on the skin of the face; they are vulgarly known as 'grubs.' They do not occur in the follicles provided with well-developed hairs, such as those of the beard and scalp. On crushing a comedo and placing it in a little water under a microscope, it will be seen to consist of epidermic cells, granular matter, oil globules, and a number of minute hairs. Rindfleisch says, that as the hair sac is club-shaped, the secretions from its walls are easily hindered in their escape, and it is only the vigorous growth of the hair which prevents the cells shed by the epidermic lining of the follicle from remaining in its interior; the hair drags them with it as it grows, so that it is a self-cleaning apparatus. This explanation is, I have no doubt, true as far as it goes, and is in accordance with the fact, that it is in the follicles in which the hairs are not visible on the surface of the skin, that comedones are most apt to form. The true explanation, however, of their formation he has failed to appreciate. It is, as I believe, to be found in the gradual accumulation of minute hairs within the follicle, hairs which never grow sufficiently long to protrude beyond the mouth of the sac, but are shed within it, and so, in course of time, accumulate in considerable numbers; they become matted together with sebum and scales, and thus prevent the natural escape of the contents of the follicles; thus a comedo is produced. The presence of the so-called *Acarus folliculorum* has nothing whatever to do with the formation of comedones; indeed it is not generally to be found in these cases.

Rindfleisch says, if the over-secretion is restricted to the fundus of the hair sac, an epidermic globe is produced, and should this globe attain the size of a millet seed, it receives the name of milium; with this view I do not agree.

MILIUM.

Syn. *Grutum, Strophulus Albidus.*

Milium appears as small, round, white bodies, generally isolated, and lying immediately beneath the cuticle. They are most commonly met with on the eyelids, scrotum, and skin of the penis. Unlike comedones, they are occasionally found in close proximity to well-developed hairs; this is especially the case in the skin of the scrotum. The essential difference between comedo and milium is, that the former occupies the ***hair sac***, the latter the ***sebaceous gland itself.*** In other words, milium consists of a sebaceous gland, the duct of which has been occluded or destroyed, and the gland itself over-distended with accumulated secretion. They are occasionally met with at the edges of cicatrices; and in such diseases as lupus, which lead to a partial destruction of the the skin, they are common. In these cases the duct of the gland is probably destroyed, while in other instances it may be only blocked. On making a slight incision through the epidermis which covers one of these little white bodies, and pressing out the contents, it will be seen, under the microscope, to consist of epidermic cells, oil-globules, and cholesterine crystals.

The differential diagnosis between milium and comedo is not of much practical importance. Comedones are found for the most part on the face and upper part of the back, in fact in the same region as ordinary acne, with which they are clinically associated. Milium, on the other hand, is usually of larger size and not especially associated with acne, nor is it found in those positions where acne is common. These facts, together with the anatomical distinction already pointed out, are quite sufficient to enable us to distinguish between these two distinct affections.

STEATORRHŒA.

Syn. *Stearrhœa, Seborrhœa, Ichthyosis sebacea, Acne sebacea.*

Definition.—Steatorrhœa is an excessive secretion of imperfectly formed or altered sebum, mixed with more or less débris of epidermic scales and dust. Three varieties are met with: (1) The common scaly steatorrhœa chiefly found on the scalp, and called *steatorrhœa* or *seborrhœa sicca.* (2) *Ichthyosis sebacea* or spurious ichthyosis, a rare variety of seborrhœa in which the accumulation is very thick, hard, adherent and blackened from exposure. The crust thus formed cracks in the direction of the lines of the skin into diamond-shaped plates, which gives it a close resemblance to true ichthyosis. (3) *Steatorrhœa oleosa,* which generally affects the face and especially the nose.

In new-born babies we occasionally meet with an accumulation of sebum (*vernix caseosa*) which dries into thin plates and quickly falls off; it may, however, continue to form on the scalp for a short time after birth, but it is of little pathological importance. Lastly, seborrhœa of the scalp, the result of syphilis, is not uncommon.

Under the head of seborrhœa, Hebra notices the so-called *Ichthyosis congenita neonatorum,* which he regards as a variety of this disease, and says, that the children thus affected are either born dead, or die a few days after their birth. The late Mr. Naylor, on the other hand, regarded it as a form of true ichthyosis, and thus describes it: 'In these cases the skin appears tightly stretched throughout, and over the trunk and limbs it is ruptured in transverse or parallel lines. The eyes are fixed in consequence of the rigid state of the lids, and so likewise are the lips, which are converted into hardened bands and expose the gums, and no vestige of an external ear is seen. The entire body presents an assemblage of lozenge-shaped spaces or intervals, caused by a separation of the fibres of the cutis, sufficiently numerous and distinct to warrant the appellation of a "harlequin" fœtus, which is allotted to it.' Niemeyer says: 'It would appear that the horny case which covers the child must have formed at an early period of intra-uterine life, probably through melting together of the caseous varnish composed of cells of epidermis and cutaneous secretion. It is always evident that the rigid horny coat which is all cracked into fragments, has become too small to cover the fully grown fœtus, and has crippled the development of its nose, lips, ears, fingers, and toes.' One objection to regarding this singular condition as ichthyosis proper, is that it does not appear to be especially prevalent in families subject to the latter affection. Again, the most severe cases of ordinary ichthyosis are but little marked at the time of birth.

Steatorrhœa sicca.—This form is usually met with on the scalp and eyebrows, and in adults is characterised by the formation of thin, dirty white or yellowish scales; the outermost of these become dry and fall off as a scurf. At the same time the hairs are shed rapidly while those that replace them are imperfectly developed, so that a scanty supply, especially on the top of the head, is quickly produced. In uncomplicated steatorrhœa there is no inflammation of the skin and little itching, but it often happens that the affection gives rise to, or is associated with, slight secondary eczema, or more commonly, simple folliculitis, and then irritation and itching become a troublesome feature. Indeed *steatorrhœa sicca* rarely exists for any length of time without producing other changes, especially in the epidermis, and in this modified form the disease is commonly known as *pityriasis capitis* or *alopecia furfuracea*, in which the scalp becomes covered with great quantities of fine, pearly-white, glistening scales which are constantly shed, and give the hair the appearance of having been powdered. There is, in fact, an excessive desquamation of cuticle, and when the hairs participate in these changes, as they often do, the vertex becomes partially bald. The degree of itching depends on the amount of folliculitis present. This affection is much more common in women than in men, and is often associated with chlorosis and disturbance of the menstrual functions. In cases of long standing the hair never recovers its full vigour of growth.

Differential diagnosis of steatorrhœa sicca.—Steatorrhœa may be mistaken for, 1. eczema or psoriasis; 2. syphilitic steatorrhœa; 3. erythematous lupus. In distinguishing common *steatorrhœa capitis* from other scaly diseases, the following points should be especially remembered: (1) It is more common in women than in men; (2) it is often confined to the hairy scalp and eyebrows; (3) the hair combs out or falls off readily; (4) there is no inflammation and but little itching except in chronic or complicated cases; (5) the crusts formed are greasy, as may be shown by treating them with ether, or by examination under the microscope.

1. Steatorrhœa may be mistaken for dry eczema or psoriasis, but on removing the crusts, the skin is seen to be much less red than in the two latter diseases, and quite smooth. Moreover, eczema and psoriasis are rarely confined to the hairy scalp, but extend down the neck or forehead, and especially behind the ears. In psoriasis the hair *rarely falls off*, and in eczema there is always *severe itching*, and the glands at the back of the neck often become enlarged; this is not the case in uncomplicated steatorrhœa. In simple folliculitis of the scalp, that is, chronic inflammation of the follicles with *defluvium capillorum*, itching is always present and often severe; the skin is red and the formation of scales comparatively slight; but it must not be forgotten that this affection is often combined with *steatorrhœa sicca*.

2. Simple steatorrhœa may be distinguished from syphilitic, by the fact that the latter is usually attended with a more rapid and complete loss of hair, and by the presence of specific eruptions on other parts of the body, together with other signs of a syphilitic taint.

3. Erythematous lupus is particularly liable to affect the nose and cheeks below the eyes where steatorrhœa is also met with; and as the former disease is often accompanied by the latter, it is possible that mistakes in diagnosis may arise. In erythematous lupus, however, the margin of the patch is more prominent, and the crusts more firmly adherent, the masses of sebum extending into follicles, and often assuming a greenish colour. There is also more pain, irritation, redness and swelling in E. lupus than in simple steatorrhœa. Lastly, a careful examination of the patch of lupus after removing the scales, will show that there is *loss of tissue,* and other characteristic changes going on in the true skin, whereas in steatorrhœa the true skin is quite healthy.

Spurious ichthyosis may be mistaken for true ichthyosis, but in order to distinguish the one from the other we must remember: (1) that the latter disease is often hereditary, and always congenital and permanent; (2) that the skin of the whole body is usually dry and more or less affected; (3) the function of perspiration is much impaired. Spurious ichthyosis, on the other hand, is almost always a local affection and not congenital; the sweat glands are normal, and the skin of the unaffected parts is perfectly soft, moist and natural. The disease is, moreover, curable.

Steatorrhœa oleosa.—This variety of the disease is usually confined to the face, and is a very common complication of severe *Acne rosacea.* It consists in an excessive secretion of sebum which is changed in character into an oily fluid. This oil is poured out on the surface of the skin and gives it a shining appearance. When dabbed with a piece of blotting paper the fluid is absorbed, and its greasy nature at once becomes evident. From the ready adhesion of dust the skin is apt to assume a dirty appearance, which is very characteristic. This affection is especially prevalent in spirit-drinkers.

Steatorrhœa præputii.—The sexual organs in both the male and female are liable to a kind of steatorrhœa. In the male it affects the glans penis and prepuce, beneath which a white greasy substance, known as *smegma*, is apt to accumulate; this consists of the secretion of Tyson's glands, mixed with epidermic cells from the glans and prepuce. When the smegma is formed in excessive quantity and allowed to accumulate, it acts as an irritant, and the glans and prepuce become red, swollen, painful and discharging. The tendency to this inflamed condition of the mucous membrane is much increased if there is any phimosis. The affection may be easily mistaken for *gonorrhœa*, and a little care is required in making a diagnosis. In women, the smegma accumulates chiefly in the grooves between the labia and nymphæ, and about the clitoris. It may lead to an inflammation similar to that above described; and it is well to bear in mind that it occasionally occurs in young girls as well as in women.

Treatment.—In the general management of steatorrhœa we may have to deal with those diseases with which the abnormal sebaceous secretion is often associated, such as syphilis and chlorosis, in which the general treatment would be obvious. In most cases not associated with any special malady, the internal administration of iron in combination with arsenic will be found useful. The local treatment consists in the first instance in removing any crusts which may be formed by the accumulation of sebum. When these are very hard and dry, they should be softened by the application of rags soaked in a weak lotion of liquor potassæ and water (℥j to Oss) until the crusts can be easily rubbed off. In ordinary cases, however, it is sufficient to rub the parts well with oil, and then thoroughly wash them with soft soap and warm water, or the spiritus saponis alkalinus may be used with advantage. The subsequent treatment consists in the use of the white precipitate, nitrate or red oxide of mercury ointment, diluted with vaseline. When the skin is irritable, a lotion containing borax and glycerine

(9) will be found useful. Before any local treatment is adopted, it should be explained to patients that the process of rubbing off the crusts is attended with the removal of a large number of loose hairs, otherwise they are apt to think that the loss of hair is caused by the treatment rather than by the disease. In steatorrhœa of the genitals, the free use of soap and warm water, followed by powdering with oxide of zinc, will be found to be the best method of treatment. A pretty strong lead lotion will also be found a useful application.

Reference to Plates.

Steatorrhœa. Hebra's Atlas, Heft iii. Tafeln 8 and 9 (good); Fox's Atlas, plate 65; Cazenave's Atlas (*Acne sebacea*), plate 29.

For *Molluscum contagiosum*, see Class V.

2. *Disorders of the Sweat Glands.*

Disorders of the sweat glands may be conveniently considered under two heads: (1) those which are functional, (2) those that are structural. The former includes all the more interesting and important affections of this class, such as hyperidrosis, osmidrosis, chromidrosis, while structural changes are almost confined to simple hypertrophy of the sweat follicles, though some writers have, no doubt erroneously, classed 'miliaria' and 'sudamina' amongst structural disorders of the sudoriparous glands.

HYPERIDROSIS.

Hyperidrosis or excessive sweating occurs commonly in certain stages of most febrile affections, and in some diseases, such as acute rheumatism, is a very constant feature; but in these and all similar cases, the hyperidrosis is merely a part or symptom of some general malady, and cannot be regarded as a functional disease of the skin. Associated with this excessive sweating, we frequently find the skin covered with small clear vesicles, the walls of which are so thin and transparent that the body looks as if it had been sprinkled with minute drops of water; the illusion is sometimes so perfect that it is almost impossible to resist the temptation to touch them, in the expectation that they will disappear and feel moist to the finger. These sudamina, though commonly associated with excessive sweating, are not invariably so. I have occasionally seen them appear on a perfectly dry and very hot skin, where the perspiration, so far from being in excess, was, and had been deficient. This fact suggests that a high temperature of skin is an important element in their production.

Sudamina pure and simple are minute drops of *sweat* that collect between the layers of the epidermis; they are especially met with in such diseases as phthisis and acute rheumatism. The vesicles thus formed, occasionally become milky and puriform, and then the eruption is called *miliaria alba.* This change in the contents of sudamina is apt to occur in certain individuals, and is much favoured by covering the skin with warm poultices. At other times sudamina may show more marked signs of inflammation, and become surrounded at the base by a little red halo; they are then called *miliaria rubra.* The inflammation is an accidental change, and is not at all an essential part of sudamina; it may, however, lead to an erroneous belief that the inflamed vesicles constitute a peculiar form of eczema. Against this view it may be urged that they do not especially occur in eczematous subjects; they do not run the course of ordinary eczema or form excoriated surfaces, and are not attended with the amount of itching and irritation which is characteristic of that disease.

Local hyperidrosis is by no means uncommonly associated with functional disturbance of the nervous system; it may affect one half of the head and face, or exactly one half of the whole body, or it may affect symmetrical parts, as, for example, the palms of both hands, remarkable instances of which I have seen; but all these forms of local hyperidrosis belong to disorders of the nervous system rather than to those of the skin.

The following illustrative case was under my care in the Middlesex Hospital, in January 1874. A stout man was admitted with cerebral hæmorrhage and consequent aphasia, with paralysis of the right side of the face, arm and leg; the paralysis of the arm was at first complete. He recovered from the aphasia, and to a considerable extent regained the use of the arm and leg, but he suffered from recurrent attacks of profuse sweating, so that the skin was literally bathed with moisture; it was, however, strictly limited to the partially paralysed side; this was always accompanied with œdema and a rise of temperature, indicated both by touch and thermometer, also strictly confined to the exact half of the body originally paralysed. Here the vaso-motor system was evidently at fault.

There are, however, certain kinds of chronic local hyperidrosis which are really of dermatological interest; they occur for the most part about the scrotum and perinæum, the axillæ, and more particularly about the hands or feet. The cases to which I refer do not appear to be *especially* under the influence of the nervous system; at least they are distinct from those to which I have referred above, and the sweating is chronic and habitual, and leads to a kind of maceration of the cuticle, which becomes sodden, turns white and peels off, leaving the skin in a very exposed and tender condition. Hebra points out that these cases of severe local hyperidrosis have been greatly misunderstood, and that the effects of the excessive sweating may do more than produce a mere reddening of the surface and production of papules and vesicles. 'On the contrary, they sometimes pass into severe cutaneous affections which are in no way distinguishable from those of eczema caused by other local irritants. In other words, the *hyperidrosis localis may give rise to eczema in all its grades.*'

It is to this local form accompanied with more or less eczema, that the name 'dysidrosis' has been applied by Dr. T. Fox; it must be added, however, that he does not admit this, but regards dysidrosis as something quite distinct from local hyperidrosis, whereas I regard it as an accidental complication of local hyperidrosis.

REFERENCE TO PLATES.

Hyperidrosis localis (*Dysidrosis*). Fox's Atlas, plate 5. The white sodden condition of the cuticle and secondary eczema, produced by sweating, and described by Hebra, is here well shown.

OSMIDROSIS AND CHROMIDROSIS.

Osmidrosis (ὀσμὴ odour, ἴδρωσις sweating), or *bromidrosis*, consists in the exhalation of disagreeable odours from the skin, associated with more or less excessive sweating. It may be doubted whether osmidrosis, in the strict sense of the word, really exists, for sweat when first excreted is almost always free from odour, or nearly so; but, under certain circumstances it readily undergoes decomposition, and then we have osmidrosis produced. In most of these cases, however, it is not simply the decomposition of sweat that produces the odour, but also that of the oily matter excreted on the surface of the skin; fatty acids of peculiar and disagreeable smell are apt to be formed, such, for example, as caprilic acid. Again, it is well known that in certain general diseases the excretions from the body are liable to undergo peculiar and rapid decomposition, and then we have odours produced which may be respectively characteristic of those maladies. Local osmidrosis is met with mostly in the same regions of the body that are subject to hyperidrosis, such as the axillæ, perinæum and feet; indeed, from what I have said as to the nature of this disease, it will be readily understood that the maceration of the cuticle and the saturation of the clothes with sweat would favour the decomposition of the cutaneous products. A minute quantity of decomposing matter is sufficient to set the process going in fresh excretions, and, moreover, it is in the axillæ and about the perinæum that the sebaceous material is most liable to become odoriferous.

Chromidrosis or so-called coloured sweating, is met with in two perfectly distinct forms: (1) That which sometimes occurs as a rare affection in hysterical women, the exact nature of which is unknown. It appears chiefly on the face, especially about the lower eyelids, and generally consists of an oozing of blackish matter on the surface of the skin. (2) That which depends on the presence of colouring matter derived from such substances as the salts of iron or copper. Dr. Kollman recorded a case of blue sweating (cyanydrosis) in a man aged forty. The chemical analysis showed that the colour depended on the presence of phosphoric acid and oxide of iron, and the colour of the sweat was more intense after the administration of iron. Several cases have been recorded in which the under clothes of workers in copper have been constantly stained by the perspiration of a bluish colour, and I have myself met with one instance of the kind. A most interesting case of red chromidrosis (or hæmatidrosis) complicating tetanus, has been recorded by Dr. S. Wilks.[1] Dr. Stevenson reported it as follows: 'The supposed blood stains from the sweat are extremely like ironmoulds. On incineration they yield to acids a little iron, and the ash is red from the presence of iron. The stains are quite insoluble in water and in alkaline solutions; in this respect they are totally different from the colouring matter of the blood in all its forms. I have been unable to procure any *coloured solution* or blood-corpuscles from the stains. They are, therefore, not blood. Possibly they may be derived from blood, because they contain iron, but just as probably they may have never contained hæmatin or hæmaglobin. As the unstained portions of the napkin turn tincture of guaiacum blue, the guaiacum test is inapplicable. The quantity of colouring matter must have been very small.'

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[1] *Guy's Hospital Reports*, 1872.

Hæmatidrosis is generally believed to be an extravasation of blood into the sweat glands.

Anidrosis is a name applied to an abnormally deficient state of activity in the sweat glands. It is an almost constant attendant upon some diseases, as, for example, ichthyosis, diabetes, &c., and as such is hardly to be regarded as a disease of the skin, but rather as a symptom of other diseases.

Structural changes in the sweat glands.—As I have already stated, the only uncomplicated structural change that occurs in the sweat glands is simple hypertrophy, which is thus described by Rindfleisch: 'True hypertrophy of the sudoriparous glands gives rise to a flat fungoid elevation of the skin, which, smooth and hairless, is not unlike a soft wart. On cutting into it, however, we see at once that neither the papillary body nor any other part of the cutis is involved. The sweat glands, as everybody knows, lie at the junction of the skin with the subcutaneous tissue; it is here therefore that the main body of the tumour is really situated; it consists of a pad of sweat glands from three to four lines in thickness, and of corresponding width. Each single gland may attain to the diameter of one line; the adipose tissue seems to be partly pushed aside, while the bands of connective tissue between the individual glands are thickened.'

Treatment of hyperidrosis and osmidrosis.—In mild forms of hyperidrosis unattended with eczema, such as are met with in the axillæ and about the perinæum, astringent lotions, such as a drachm of tannic acid to six ounces of spirits of wine, applied freely and frequently, and allowed to dry on, will be found useful; the application of the lotion should be followed by starch or oxide of zinc powder applied before the lotion is quite dry, so that it may adhere to the skin. Warm baths must be avoided. In mild cases of hyperidrosis of the feet the same treatment may be adopted, but the stockings should also be well powdered and changed frequently, and a weak solution of nitrate of silver painted between the toes. In all severe cases of hyperidrosis and osmidrosis we must have recourse to Hebra's method, which he says is always successful, and describes as follows: 'A certain quantity of the simple diachylon plaister (emp. plumbi, emp. lithargyri) is to be melted over a gentle fire, and an equal weight or a sufficient quantity of linseed oil is then to be incorporated with it, the product being stirred till a homogeneous mass is produced, sufficiently adhesive not to crumble to pieces. This is then to be spread over a piece of linen, measuring about a square foot. The foot of the patient having been first well washed and thoroughly dried, is now to be wrapped in the dressing thus prepared. Pledgets of lint, on which the same ointment has been spread, are also to be introduced into the space between each pair of toes, to prevent their touching one another; and care must be taken that the foot is completely covered, and that the dressing is accurately in contact with the skin. When this has been done, an ordinary sock or stocking may be put on the foot, and outside this a new shoe, which must be light, and should not cover the dorsum of the foot. After twelve hours the dressing is to be removed; the foot is then not to be washed, but must be rubbed with a dry cloth and starch powdered. The dressing is then to be renewed in the same way as before, and its application is then to be repeated twice a day.

'This procedure must be continued for from eight to twelve days, according to the severity of the case. During this time, however, the patient need not keep his room, but may go on with his business as usual. At the end of this period the dressings and pledgets are to be removed, the foot is to be again rubbed with some pulverulent substance, and the patient may then be allowed to wear his ordinary shoes and stockings. In the course of a few days it will be found that a brownish-yellow layer of cuticle is beginning to peel off from all those parts of the skin which were before affected with the disease, and that a healthy clean white surface of epidermis is exposed as this substance separates. When this layer of cuticle has become completely detached, the foot may for the first time be washed, but it will still for some time be advisable to dust some pulverulent substance into the stocking, or to rub it into the skin of the foot. After the lapse of a fortnight or three weeks from the first application of the dressing, the hyperidrosis will generally have disappeared, and the cure will last for a year or longer, or may even be permanent. In quite exceptional cases, however, it will be found that a single course of treatment is not sufficient to effect the complete removal of the complaint. The whole procedure must then be gone through a second time; but this will certainly and without exception bring about a cure.'

With regard to this method I can strongly recommend it as the only way of getting rid of a most troublesome malady. But it is, I find, essential that a thorough exfoliation of the outer layer of cuticle should be produced, otherwise the treatment is of little use.

CHAPTER VI.

CLASS IV.—*DISEASES OF NUTRITION AND GROWTH.*

GROUP 1.—HYPERTROPHIES.

A. OF THE EPIDERMIS.

Callosities, Tyloma, Clavus, Verruca, Condylomata, Affections of the Nails.

KERATOSES.

A DISTINCTION must be drawn between a callosity or tyloma and clavus or a true corn. Tyloma consists of a simple thickening of the epidermic structures, often covering a considerable superficial surface, but without affecting in any way the papillary layer of the true skin; it is therefore unattended with pain. Callosities of this kind are sometimes congenital but more commonly produced by *intermittent* pressure, and thus we see them occur especially over those prominences of the joints of the hand which are exposed to a recurrent action of this kind, as, for example, in the palm over the heads of the metacarpal bones. Certain trades and occupations will, as a matter of course, favour the development of callosities of this kind, and in some few cases, the thickening of the cuticle becomes so great as to interfere with the free extension of the hand.

Clavus or true corn consists in a conical mass of horny tissue, the base of which is directed towards the surface and the apex towards the corium; it thus presses deeply on the papillæ and sensitive structures, causing considerable pain; in this respect it differs essentially from a tyloma which produces no changes in the true skin. The constant pressure of a corn leads in course of time to an atrophy of the structures of the true skin, and not unfrequently to the formation of a little bursa. It is not difficult to understand that the formation of corns is favoured by badly fitting or tight boots. Another element in their production is probably small irregularities or exostoses on the bones of the foot, over which a corn will readily develop.

Verrucæ or warts are rounded horny growths, mainly consisting of hypertrophied papillæ of the skin; their surface is sometimes smooth, but more commonly it presents a more or less fibrillated and fissured appearance.

Congenital warts are not very common and belong rather to the class of nævi; they are, however, of warty structure, associated with excess of pigmentation, and sometimes with a copious growth of hair. They do not usually take the round form of common warts, but are more irregular in shape and sometimes of large size.

Acquired warts first appear under the epidermis; but as they increase in size they push this structure before them, so that a little smooth tumour is formed, which is raised above the surface of the surrounding skin; in course of time the smooth epidermic covering is lost and we have the well-known filiform surface of the enlarged papillæ exposed; at this stage the nature of the growth is easily recognised. *Verrucæ* vary very much in size, colour and shape; some are pedunculated, others pointed, while others again assume a flat or globular form. Warts may occur on almost any part of the body, but their favourite seats are the head and hands; on the scalp they are more commonly met with in adults, while on the hands they are more common in children. Occasionally they appear almost suddenly in vast numbers, a veritable eruption, and after lasting for some time, they atrophy and disappear almost as suddenly as they appeared and without any apparent cause. Permanent or *persistent* non-congenital warts are sometimes met with, but they are not common.

Cornua or *horns* are of rare occurrence. They consist of elongated protrusions from the skin of a brown or yellow colour, and sometimes attain several inches in length. They are most commonly met with on the head, but are also found on other parts of the body. Their structure is various; sometimes they are of sebaceous origin; others are met with which consist simply of modified epidermic cells, assuming very much the consistency of the nails. In the great majority of cases, however, they consist of greatly elongated, warty growths, made up of closely packed columns. The growth of horns is very slow and quite unattended with pain.

AFFECTIONS OF THE NAILS.

Affections of the nails proper belong for the most part to those of defective nutrition, and resolve themselves into the various forms of hypertrophy, atrophy and malformation. We meet with the well-known lateral hypertrophy, where the borders curve inwards and press into the cutis, thus forming the painful 'ingrowing' nail. Again, we have a different but common form of hypertrophy, where the central part of the nail becomes thickened into an irregular shapeless mass, sometimes covered with ridges and furrows, and altered in texture so that it becomes opaque, brittle and discoloured. Atrophy of the nail is much less common than hypertrophy; it occurs, however, occasionally from injury and also in connection with certain diseases of the skin. A congenital arrest of development of the nails is sometimes associated with a similar condition of the hair.

We may expect to meet with alterations in the growth of the nails from blows and injuries, or from undue pressure, and also in the following diseases: psoriasis, chronic eczema, and especially in that severe variety known as pityriasis rubra, in elephantiasis græcorum, ichthyosis, and above all in syphilis. When any of these chronic diseases attack the matrix, an alteration in the growth of the nail occurs, and what would in other parts of the body appear as an overgrowth and thickening of the epidermis, takes in this case the form of an irregular hypertrophy of the nail. In more acute inflammatory affections, such as erysipelas, acute eczema, and acute onychia, a different result is produced, namely, the shedding of the nail, just as the cuticular layer, or the hair, is shed on other parts of the body.

In all those chronic diseases in which the nails are apt to be affected, the matrix and bed of the nail are usually the first to suffer, and hence we generally see the changes apparently originating in the lunula. Sometimes, however, the altered condition of the nail is noticed chiefly at the margin or anterior border; in these cases it is probable that changes have been going on gradually, though unperceived, for a considerable time, and that they are not really confined to the edges; the whole nail being more or less altered in texture.

As chronic affections of the nails, arising in connection with the different diseases of the skin to which I have referred, do not generally present a very distinctive appearance, we must be guided in our diagnosis by the presence of other symptoms, and by the history of the case.

Onychia of a severe type, but non-syphilitic, is not common in London, but is said to be rather prevalent in the flax-spinning mills of Belfast. Dr. Moerloose of Ghent was the first to recommend that *Onychia maligna*, as it is called, should be treated by the application of powdered nitrate of lead to the ulcer. It has since been used with great success by Vanzetti of Padua, and Mr. MacCormac of St. Thomas's Hospital.

Psoriasis of the nail is indicated in its early stages by a loss of transparency; this is followed by an uneven thickening of the nail, which at the same time loses its smooth shiny appearance, and becomes of a darker colour and brittle, so that the edge gets fissured and broken, and does not extend beyond the tips of the fingers; the whole nail is sometimes destroyed. The disease should be treated by the internal use of Fowler's solution. I have occasionally met with psoriasis of the nails, the skin being unaffected; the disease has always yielded to treatment by arsenic.

Ringworm of the nails is far from common, but is occasionally met with in children suffering from *Tinea tonsurans* on other parts of the body.

Changes in the form of the nails.—Longitudinal and transverse markings and other irregularities are often developed in nails, as the result of some altered state of nutrition, or from injury to the nail. The exciting causes of these irregularities may be some general illness, or a local lesion. In the latter case the nail may remain permanently distorted, and the removal of it produce no satisfactory result. Sometimes nails become much thickened and very rough, ceasing at the same time to grow in length, so that the free edge of the nail becomes continuous with the neighbouring cuticle. This is more common in the foot than in the hand. The only plan of treatment is to scrape down the surface of the nail from time to time, and so reduce it to a convenient thickness. 'The in-growing of a toe-nail,' says Dr. T. Fox, 'is easily cured by softening it, and then scraping off as much as possible, so as to thin it in the middle.' A similar plan may be conveniently adopted in order to remove splinters imbedded under the nail. The nail should be scraped thin over the splinter and then cut through; the foreign body may thus be removed almost without giving pain.

REFERENCE TO PLATES.

Disease of the nails. Syd. Soc.'s Atlas, plate 17; Fox's Atlas, plate 71.

B. Of the Corium.

Elephantiasis Arabum—Scleroderma—Morphœa—Striæ Atrophicæ.

ELEPHANTIASIS ARABUM.

Definition.—*Elephantiasis arabum* is a chronic disease characterised by an enormous local hypertrophy of the skin and subcutaneous connective tissue caused by recurrent inflammation in the vessels and lymphatics of the part affected.

In England this disease is comparatively rare; but in some tropical and sub-tropical countries, as, for example, the West Indies, South America, West Africa, Southern China and Japan, it is very common. It is especially met with in marshy and unhealthy coast districts. The disease is one of adult life, and usually attacks the extremities, particularly the leg below the knee, and at the onset of the malady one limb only is affected. It often begins somewhat suddenly, with pain and inflammation in the leg, attended by more or less febrile symptoms, which are sometimes severe and accompanied by thirst, headache and vomiting. The inflammation is of an erysipelatous nature, and especially attacks the lymphatics and vessels of the limb, usually involving the glands in the groin. The leg swells, and the skin becomes red, painful and hot. Sometimes the course of the inflamed lymphatics can be traced up the thigh, presenting the character of red lines or bands, very painful to the touch. The attack gradually subsides, and the febrile symptoms pass off, but the limb remains swollen and œdematous; ere long, however, the inflammation returns with all its former symptoms, runs a similar course, and after a time again subsides, but only to be followed by another attack of the same kind; and in consequence of these repeated inflammations the leg and foot become permanently enlarged. If we examine a limb thus affected we find that it is hard and tense, the skin cannot be pinched up between the finger and thumb; it pits a little on using considerable pressure, showing that there is some œdema, but the greater part of the enlargement is evidently due to a thickening and induration of the skin and subcutaneous connective tissue, while in extreme cases the deeper fibrous structures of the limb, such as the fasciæ, the sheaths of the vessels and periosteum are involved. In chronic cases the leg is greatly hypertrophied; sometimes the skin is tense and smooth, but more commonly it is rough, brawny, ichthyotic, and darkly pigmented, the natural folds and furrows are greatly exaggerated, and under these folds the epidermis is apt to become macerated and decomposed, giving rise to offensive discharges. Sometimes eczema is set up, at other times varicose ulcers are formed, and in rare cases the lymphatics rupture. All these are, no doubt, secondary consequences of the disease, but they greatly aggravate the suffering of the patient.

On cutting into the dermic structure of a leg affected, we find that the chief hypertrophy is in the subcutaneous connective tissue, which becomes firmly attached to the skin, so that all well-defined boundary is lost, the natural fat has relatively, if not absolutely, diminished, and the veins, which are very numerous, are irregularly enlarged and varicose, while not a few are plugged. Similar changes are met with in the lymphatics. It is not difficult to see that repeated inflammations have greatly interfered with the venous and lymphatic circulation, so that the limb has been chronically congested, and a superabundance of lymph has been constantly present in the subcutaneous cellular spaces; this condition is quite sufficient to explain the gradual increase in the fibrous tissue, and the monstrous enlargement which is produced.

Though elephantiasis is far more common in the leg than in any other part of the body, yet it occasionally occurs elsewhere, as, for example, in the arm, hand, ear, and genitals. I have met with one instance in which first one arm and subsequently the other became affected, and in which the forearm attained enormous dimensions. In this case there were repeated attacks of inflammation in the lymphatics of the arm and the glands of the axillæ. Elephantiasis of the upper limb is, however, rare; much more commonly is it met with in the scrotum, which has been known to attain such a huge size as to weigh upwards of 100 lbs., and actually to touch the ground.

Lymph scrotum is a peculiar form of enlargement of the scrotum, known as nævoid elephantiasis; it is associated with chyluria and a varicose condition of the lymphatics of the scrotum, apparently due to the presence of the filariæ sanguinis hominis. There is generally in this affection, an exudation of a pinkish milky fluid from the scrotum, which readily coagulates, and when this discharge of fluid is copious it is attended by great exhaustion on the part of the patient. It must not, however, be supposed that this parasite is present in all cases of elephantiasis.

Treatment.—The only treatment I can recommend in elephantiasis of the legs is careful and persistent strapping from the foot upwards with plaster.

REFERENCE TO PLATES.

Elephantiasis arabum. Cazenave's Atlas, plate 36.

SCLERODERMA.

1. CIRCUMSCRIBED SCLERODERMA.

Syn. *Addison's Keloid, Morphœa.*

2. DIFFUSE SCLERODERMA.

Syn. *Sclerema, Scleroma, Scleriasis.*

Definition.—*Scleroderma* is a local affection of the skin, characterised by a peculiar idiopathic overgrowth of the connective tissue.

Although I have adopted the terms *diffuse* and *circum-*

scribed to distinguish the two best-known forms of scleroderma, it must be understood that the words are only applicable in a relative or restricted sense. The circumscribed form of the disease known as Addison's Keloid appears in the skin as a round or oval patch, of a pale yellowish-white colour and wax-like appearance, which has been not inaptly compared to ivory; it has a well-defined margin and is surrounded by a pale pink or violet areola of vessels. Sometimes the whole surface of the part affected presents a superficial pink appearance, especially in the early stage of the disease. To the touch the skin feels firm, brawny and inelastic, and is not easily pinched up between the finger and thumb. The cuticle is but little affected and generally presents a smooth surface, not raised above the surrounding tissues. The skin in the immediate neighbourhood of the part affected is apt to undergo pigmentary changes and to look brown or mottled. Sometimes the disease is confined to a single patch, which increases very gradually in diameter until it may attain the size of the palm of the hand or larger, but more commonly several patches are developed at the same time. All the cases of this disease that I have met with, have been attended with pain and tenderness in the part affected; in some instances the pain is very slight, and it cannot, therefore, be regarded as a very striking symptom. This form of scleroderma is, without doubt, far more common in women than in men, and is perhaps rather apt to appear on the breast; it is not confined, however, to this region, but is met with on all parts of the body. As a rule, the affection developes very slowly and lasts for a considerable time, often for several years, but generally a spontaneous cure takes place; the new tissue undergoes fatty degeneration and is absorbed, leaving the skin perfectly healthy. Sometimes, instead of resolution, atrophic changes occur with a contraction of the tissues, so that a parchment-like condition of the skin is produced.

2. Diffuse scleroderma, like Addison's keloid, is a local affection, but it has a tendency to involve a larger extent of tissue. Its appearance, too, is different from that of the circumscribed variety. In typical cases it presents a smooth shining surface, and, unless disguised by pigment spots, is quite white or of a rosy hue.

The cuticle is usually but little affected; there are, however, exceptions to this rule, in which we find rough and scaly patches. On pressure with the finger the skin feels hard and cold, and is compared by most writers to that of a frozen corpse. One might imagine, from this frigid and marble-like appearance, that the sufferer had taken a passing glance at Medusa's head. It is impossible to pinch up a fold of the skin, or to slip it over the subjacent tissues; all the parts seem firmly adherent. Usually the tissue involved is slightly raised above the surrounding skin, and this is especially the case when the disease is at its acme, that is, before any contraction or resorption of the new growth has occurred. The pigmentary changes in the part affected are often remarkable; generally the skin is speckled, and sometimes we meet with brown and discoloured patches, which may mask the peculiar frozen look which is so characteristic. In many cases, however, irregular pigmentation is only met with at a late stage of the disease. I well remember the strikingly cold, rigid, and stone-like appearance of the hands of a man who was some time ago under my care, suffering from this disease. All the joints of his fingers were fixed in a semi-flexed position, so that his hands resembled marble claws.

Scleroderma may attack any part of the body; but it is perhaps more common on the upper extremity than elsewhere. It has a great tendency to form elongated bands, which may pass across a joint and thus render it quite immovable; or across a soft structure like the mamma, and divide it into two parts. When it attacks the face, the features become expressionless and rigid, the wrinkles are obliterated, and thus an elderly person may appear rejuvenescent. The involving of only one side of the face gives the visage a peculiarly sinister and distorted appearance, due to the immobility and contraction of the part affected. Death from starvation is said to have occurred in one case from inability to move the mouth. The disease is often unilateral, and when bilateral it is generally unsymmetrical, or its symmetry is only of a rough and imperfect kind.

Occasionally the mucous membrane of the tongue, mouth, and pharynx is involved in fibrous changes, similar to those met with in the skin.

There is some difference of opinion as to the loss of sensibility in the parts affected; as a rule, however, the sensibility appears to be nearly normal, or only slightly diminished. On the other hand, the disease is often attended with irregular cramp-like pains in the affected limb. Sclerosed skin does not escape the ordinary eruptions and inflammations to which the normal tissues are liable. Moreover it seems rather subject to a superficial kind of ulceration. Artificial blisters can be produced upon it in the usual way.

There are two or three points connected with diffuse scleroderma which are worthy of especial note.

First, the development of the affection, though unattended by any constitutional disturbances, is often preceded by œdema of the limb attacked. This seems to point to a commonly received view that there is in these cases a stasis of lymph in the skin and subcutaneous tissues, or, in other words, that there is an excess of nutrient material, which leads to the formation of a superabundance of connective tissue.

Secondly, the progress of scleroderma is remarkable. Usually it takes several years to develop, during which time it may attack different parts of the body; but sooner or later the tendency to its development ceases, and then one of two things happens; either a gradual process of resolution occurs, leading to a complete and spontaneous recovery, or the new fibrous growth undergoes a process of contraction, so that the tissues become squeezed and atrophied, and the skin appears as if firmly bound down to the bones; from this atrophic change there is no recovery. The question has arisen whether this atrophied form of scleriasis is really a late stage of scleroderma, or altogether a distinct affection. For my own part, I have very little doubt that it belongs to a late stage of the disease. Instead of a fatty degeneration and resorption of the new fibro-cellular growth, before the structures of the cutis have been permanently injured, which is the usual course of events, we have contraction and atrophy of tissues, analogous to a fibrous contracted liver.

Another question arises as to whether the diffuse and circumscribed forms of scleroderma are quite distinct, closely allied, or identical diseases in different stages of progress? I am inclined to regard them as very closely allied affections, though not identical, and chiefly for the following reasons:

1. The minute anatomical characters of each are nearly the same; in both we have a hypertrophic growth of the fibrous tissue of the skin, extending to the subcutaneous tissue, and encroaching upon or squeezing all the other structures of the cutis, especially the vessels. On the other hand, they are easily distinguished from each other by their form and general appearance.

2. Both varieties are apt to occur in the same individual, as was the case, for example, in Elizabeth Nicholls represented in plate 44 of New Syd. Soc.'s Skin Atlas.

3. The slow progress and ultimate spontaneous recovery, and atrophic changes and contractions, are met with in both. On the other hand, the chief points of distinction between the two varieties are: (1) Addison's keloid is more circumscribed, and takes the form of oval patches instead of ribbon-like bands. (2) Its colour has usually a more distinctly yellow shade than we see in the diffuse form. (3) It has not the hardness and rigidity of scleriasis. On the whole,

however, the points in which the two varieties differ are only slight, so that we cannot but regard the affections as very closely allied.

Differential diagnosis. That Addison's keloid may be mistaken for true keloid is proved by the fact that Casenave, as Mr. Hutchinson has pointed out, has represented a well-marked case of the former disease (plate 41, Casenave's Atlas) as the keloid of Alibert. Nevertheless the peculiar, *raised, irregular*, scar-like appearance of the latter disease is really quite unlike the oval patches of circumscribed scleroderma, which are hardly raised above the surface of the skin. Moreover, true keloid is always attended with more severe local pain than scleroderma. Diffuse scleriasis must be carefully distinguished from the hard brawny tissues of *elephantiasis arabum* and allied disorders, which are the result of chronic and repeated inflammation of the skin and subcutaneous structures. The great enlargement of the limb in elephantiasis is alone sufficient to serve as a diagnostic distinction from scleroderma.

SCLEREMA NEONATORUM.

Sclerema neonatorum bears no relation to the scleroderma of adults, except in name and in a superficial resemblance. It is a disease which runs a rapid course of from three or four days to a fortnight, and almost always ends fatally. It generally makes its first appearance in the legs, and gradually spreads upwards to the trunk, face, and arms. Its chief feature is a remarkable coldness and hard œdematous swelling of the skin, which is either quite white, livid, or mottled, and sometimes of a glistening appearance. The temperature falls considerably below the normal, and all the vital powers decline rapidly. As a subsequent change the skin may become wrinkled and furrowed, and the limbs and features rigid and immovable. The child seems as if frozen, it neither moves nor cries, and when this stage is reached a fatal result is not long delayed. The cause of this remarkable disease is unknown, though it has been observed more often associated with congenital syphilis than with any other disease.

REFERENCE TO PLATES.

Scleroderma. Syd. Soc.'s Atlas, plate 44 (Morphœa); Fox's Atlas, plate 64 ; Cazenave's Atlas, plate 41.

STRIÆ ATROPHICÆ AND MACULÆ ATROPHICÆ.

Syn. *Linear Atrophy.*

Striæ atrophicæ, or linear atrophy, is a fairly common affection, and usually takes the form of white stripes or bands, from one to several inches in length, and about half an inch or more in width, tapering towards each end. They occur in groups, especially about the hips and thighs, and are arranged in more or less parallel curves. They remind one of the white stripes that are sometimes met with on the abdomen of women after distention from pregnancy or dropsy. Their colour is peculiar, and of a glistening bluish-white, resembling mother-of-pearl. The atrophied condition of the skin is more easily felt than seen; to the touch, these streaks appear like furrows depressed below the surface, while the tissues over them seem tense, dry and thin. Microscopical examination shows that this is really the case, for there is a complete atrophy of the papillary layer of the skin, and a great diminution in the vascular and fatty tissues of the part affected.

The *macular* variety of this disease is far more rare than the striated form, but it is of exactly the same nature, and presents greater facilities for studying the different stages of the disease. I have lately had under my observation a patient suffering from *maculæ atrophicæ,* in whom the period of its duration had extended over six or seven years, and who exhibited a large number of spots in all stages of progress, and of ages varying from a few weeks to several years, so that I was well able to observe the disease in its different phases of development. In the case to which I refer, the eruption affected the skin about the upper edge of the sternum, and extended up the neck nearly as high as the cricoid cartilage. It had been developing slowly for several years, fresh spots appearing from time to time, and going through a regular series of changes, which could all be seen and studied at the same time in the same individual.

The *first* stage, which I do not find described by authors, is one which is characterised by slight redness and by well-marked hypertrophy rather than atrophy, for the spots are raised above the skin and are hard and fibrous; this enlargement is soon followed by an atrophic change, and we have produced the white appearance which is so characteristic of the *second* stage of the disease. The atrophy at this period is easily seen and more easily felt; on pressing a spot with the finger, the sensation is produced of touching a pit-like scar covered by a thin membrane. The size of the largest spots in the case mentioned did not exceed a threepenny-piece, and most of them were much smaller; they were all discrete and more or less round or oval. The general effect produced by *maculæ atrophicæ* is very striking, and quite unlike that of any other affection. This is due chiefly to the abrupt contrast in colour between the opaque bluish-white spots and the surrounding healthy skin. Another point of interest that I was able to observe, in addition to that already mentioned, was a *third* or *final* stage, consisting in the obliteration of some of the oldest spots; I cannot say that this obliteration was quite complete, because it was possible, by a close inspection, to see where they had been. They had much shrunk in size, and this shrinking seemed to me to be produced by a kind of lateral compression, as if the surrounding healthy tissues had encroached upon the spots, so that they ceased to be a disfigurement. Thus we really have three distinct stages in this curious and rare disease; first, a hypertrophic stage, which is well marked; secondly, an atrophic stage, which is the only one usually described; and, thirdly, a stage of contraction or obliteration.

A very interesting question arises as to the nature of these *maculæ atrophicæ.* Kaposi places them among the partial idiopathic atrophies of the cutis, and seems to overlook altogether the early stage of the disease that I have here described. We have no more right to regard them as simple atrophies of the cutis than we have so to regard many forms of scleroderma, unless it be contended that as atrophy is only occasional in scleroderma, and invariable (if it be so) in *striæ* and *maculæ atrophicæ,* therefore they may with more propriety be regarded as local idiopathic atrophies. Be that as it may, there is a hypertrophic stage, which I have described above, and which precedes any atrophic change whatever, and leads one to look upon this disease as closely allied to scleroderma. This view is confirmed by the fact that *striæ atrophicæ* have been observed in several instances coincidently with morphœa and scleriasis.

GROUP 2.—ATROPHIES.

Alopecia, Alopecia areata, Trichoclasis.

ALOPECIA.

Alopecia is a term which is commonly used to signify any baldness, more or less complete, and quite irrespective of cause. It is convenient to refer to alopecia as of two kinds, *congenital* and *acquired.* The former, as a permanent condition, is rare, while the latter, in one form or another, is a very common affection. As a rule, congenital baldness is only temporary, and in the course of one or two years hairs appear, which either attain their usual luxuriance or, more commonly, are but scantily developed. In some cases permanent baldness continues during life, and it has been noticed that coincidently with this condition of the hair, the teeth are imperfectly developed or altogether absent.

Acquired alopecia may result from many different causes, as, for example, senile changes, hereditary predisposition, and also from affections of the skin, which lead to an arrest of the growth of hair, either temporary or permanent. One of the most interesting of these is *alopecia areata*, the symptoms of which I am about to describe.

ALOPECIA AREATA.

Syn. *Area, Tinea decalvans, Alopecia circumscripta.*

Alopecia areata is an atrophic disease, characterised by a sudden shedding of the hair and the formation of smooth, whitish, circumscribed and perfectly bald patches. This affection is most common on the scalp, but not unfrequently the eyebrows and beard suffer, while in rare instances a universal baldness is produced. Age and sex appear to have little influence on it, though it is believed to be more common in children than in adults. Out of fifty-three cases of this disease in Mr. Startin's practice, twenty-five occurred between the ages of five and fifteen; the total number is, however, not sufficient to warrant the conclusion that this is the usual proportion. The disease is not contagious, but a predisposition to it is sometimes hereditary, and thus we occasionally meet with two children in the same family similarly affected with it. *Alopecia areata* begins, as a rule, on the scalp, and is often limited to a single spot, from which the hair falls off almost suddenly, leaving a white, smooth and shining patch, completely bald and ending abruptly in a margin of sound, unbroken hair. It is this sudden transition from complete baldness to luxuriant growth that gives the disease its peculiar and characteristic appearance. The bald patches are, in the first instance, more or less circular, and occur most frequently just behind the ears and on the occiput, but are also common on other parts of the scalp. Their development is quite unattended with pain or irritation, so that patients are often unable to say when the spots first appeared; at other times the hair comes out in the night, and the patient awakes in the morning to find a handful of loose hairs and a bald patch. On close examination of the skin, we find that it is whiter than that of the surrounding healthy tissue, and sometimes slightly depressed, so that the scalp appears thinner than normal. In a few instances the sensibility is diminished, and a difficulty may be experienced in producing the usual amount of irritation from stimulating and blistering fluids. I have said that the disease is unattended with pain, and this is no doubt true in the vast majority of cases; but, as M. Hardy has pointed out, patients sometimes complain of tenderness, and the skin appears as if bruised, but this seldom lasts long, the tissues quickly assuming the ivory-white appearance characteristic of the disease.

For the purpose of examining the hairs under the microscope, it is well to choose those that have fallen, or that come out easily at the circumference of the patch, and also any stray stumpy hairs that may possibly be found on the bald spo titself. It will be seen that the bulb of the hair is atrophied and shrivelled, and sometimes the end presents a frayed or brush-like border; 'nodular swellings,' and other irregularities, are often found near the root; but all these changes occur in other affections, and also in hairs that have died a natural death; in short, there is nothing in the microscopical appearance of the hair which is distinctive in the disease.

The first sign of improvement is the growth of pale, soft, downy hairs (lanugo) over the bald patch; if we examine these, we find that the bulb is the first part to recover its natural character, while the shaft still remains very imperfectly developed. These soft hairs are often shed several times before a growth of average strength is re-established, so that the affection may last many months or even years. Occasionally the hair recovers its natural strength without any redevelopment of pigment, so that it remains for a time perfectly grey. I have seen children whose heads presented a curious piebald appearance from patches of luxuriant white hair scattered amongst that of the normal colour. In severe forms of this disease the whole scalp may become perfectly bald, and the eyebrows, eyelashes, beard, axillary and pubic hairs entirely lost. In these cases, of which I have had several under my care at different times, a complete restoration of hair is not to be expected, but a partial recovery is by no means uncommon.

For some time dermatologists, following Audouin and Gruby, held that area was due to the growth of a (microscopic) fungus. Subsequent observations have not confirmed this view, and at the present time it is almost universally rejected. Several different causes have, in my opinion, contributed to this error; (1) The bright granules of fatty matter, which are not very easily removed from the hairs, have been mistaken for fungus spores. (2) The occasional coincident occurrence of area with *tinea tonsurans* may have led to mistakes in some few cases. (3) *Tinea tonsurans* sometimes produces *perfectly smooth bald patches*, which bear the closest resemblance to area, and may easily be mistaken for it.

Differential diagnosis.—With the exception of the bald patches occasionally produced by common ringworm, and to which I have already referred, area is scarcely likely to be mistaken for any other disease. Its sudden advent, and the abrupt transition at the margin of the spots from complete baldness to perfectly healthy hair are very characteristic marks of the disease.

Treatment.—Local stimulation with cantharides and the internal use of tonics is the only treatment.

REFERENCE TO PLATES.

Alopecia areata. Syd. Soc.'s Atlas, plate 6 (Hebra); Fox's Atlas, plate 58.

TRICHOCLASIS.

Syn. *Trichorexis nodosa.*

Changes in the structure of the hair are, for the most part, secondary, and induced by such diseases as favus, tinea tonsurans, and other affections of the scalp; trichoclasis is an exception to the rule, being primarily and simply a structural change in the hair itself, the cause of which is unknown. It was described by Dr. Beigel in 1855, and was also early noticed by Mr. Erasmus Wilson, to whom we are indebted for the name trichoclasis. I have myself met with several cases of this disease; but, like Beigel and Kaposi, I have only seen it on the hairs of the face, never on those of the scalp. I once met with a somewhat similar condition in the hairs of the axillæ, but the changes were less developed than in those found on the face.

To the naked eye the hairs affected seem to be marked with two, three or more small, white and bulging spots. 'At first sight,' says Beigel, 'these points made the impression of nits; but on traction the hairs easily broke off at one of these little white spots.' Examined under the microscope with a moderate power, they are seen to consist, at an early stage, of simply a spindle-shaped swelling of the shafts of the hair; in a more advanced stage this swelling partially bursts near its most distended part, and lastly, the cortical substance of the hair gives way with a very ragged fracture, so that the partially divided hair has the appearance of two brushes, the bristles of which interlock; at this stage the fracture is completed with the greatest ease; and a stumpy hair is left with a frayed or brush-like free extremity formed by the spindle-shaped cells of the cortical substance of the hair-shaft.

There is not the slightest evidence that this affection depends on the presence of a fungus. Beigel thinks it possible that gas may be generated in the medullary substance of the hair, which causes it to swell and burst, and that then the cortical portion is similarly affected; he only offers this as a possible hypothesis, and not as a fact that he has ascertained by observation. Under repeated shaving the disease sometimes disappears.

GROUP 3.—HYPERTROPHIC MALFORMATIONS.

1. *Diffuse.*

ICHTHYOSIS AND XERODERMA.

Etymology.—The word ichthyosis is derived from ἰχθύς, a fish, and the disease is so named from its supposed resemblance to the skin of the shark.

Definition.—Ichthyosis, in its typical form, may be defined as a congenital malformation of the skin, consisting in a hypertrophy of the papillary layers and an abnormal development of the epidermis, which, together with altered sebum, forms hard, dry and blackened scales and masses on the surface of the body; these crack in the direction of the lines of the skin, so that small lozenge-shaped plates are formed. The secreting functions of the skin are much impaired. The disease is equally common in both sexes, and is often hereditary.

Symptoms.—Ichthyosis is met with in every possible degree of severity, from a simple congenital rough skin, known in England as xeroderma, to that severe form in which the body is more or less covered with a black and horny case. That these two affections are only different forms of the same disease is proved by the following considerations:—

1. The gradations between xeroderma and ichthyosis are so gradual that it is impossible to say where one ends and the other begins.

2. Their history is the same, in other words, they are both congenital, permanent and often hereditary diseases.

Moreover it is not uncommon to find that while some members of a family suffer from xeroderma, others are affected with ichthyosis.

3. There is no essential difference in their morbid anatomy; that is, the one malformation differs from the other only in severity; in both there is hypertrophy of the papillary layer, with imperfect action of secreting strúctures, especially of the sweat glands.

Although xeroderma and ichthyosis must be regarded as essentially of the same nature, yet, when fully manifested, the one does not develop into the other; each remains as such during life. This fact is in accordance with the view that the affection is really one of malformation, and as such is not very liable to undergo progressive changes.

It is necessary to observe that German writers use the name xeroderma for a different affection, namely a rare form of atrophy of the skin.

Apropos of the hereditary character of ichthyosis, Dr. Hillier remarks: 'At the beginning of the present century two brothers, John and Richard Lambert, suffered from this disease to such a degree as to become notorious. They went about in France and other parts of Europe, exhibiting themselves for money under the name of the Porcupine Men. Their entire bodies were covered with scales having a horny appearance and consistence. The only parts not so affected were the face, the palms of the hands, the soles of the feet, and the interspaces and bulbs of the fingers. Their father is said to have been subject to the same condition of the skin, whilst they had seven sisters who were entirely free from it. It is said that they were born free from the disease, but that it began to make its appearance about six weeks after birth.'

As I have stated, ichthyosis is a congenital disease, or rather mal-development of the skin, and I would go even further and say that it is *always* congenital. On this point there is, however, some difference of opinion, arising, I believe, from the fact that if the child is suckled, the malady is but little manifested during the first year of life, for then the skin is naturally soft and elastic, and as it is frequently washed, any accumulation of scales on the surface is prevented. A close observation of the skin, however, even at a very early age, will detect a slight tendency to hypertrophy of the papillæ and a little roughness about the face. It must also be borne in mind that certain forms of steatorrhœa closely resembling ichthyosis, are developed at any age, and have been sometimes mistaken for the latter malady, though essentially distinct from it.

Although the disease is but little noticed during the first six months of life, it is evident enough two or three years later, when the skin of the whole body becomes more or less affected. Mr. Naylor remarks that 'though at its origin the face is usually involved, the disease in its progress sometimes appears partially to forsake this part, and to become finally more confirmed on the loins and legs.' It is especially about the ankles and knees that we find the greatest accumulation of blackened crusts which crack in the direction of lines of the skin into lozenge-shaped pieces. Elsewhere the skin is harsh, rough, scaly and extremely dry, and resembles more closely the skin of some of the lizard tribe than of any known fish. The face, the soles and palms, and flexures of the limbs are the parts in which these defects are least noticed. One of the most striking and important features is the absence of perspiration even in hot weather, and also the very defective secretion of the sebaceous glands; these two facts explain in part the preternatural dryness of the epidermis.

Mr. Naylor says, 'The patient's garments or bedclothes, as in *psoriasis inveterata*, will be constantly covered with numerous scales, which are regenerated as soon as shed.' I confess that my own experience is not in accordance with this statement; for, though we occasionally meet with cases in which desquamation is pretty rapid, they are exceptional, the rule being that the cuticle is very adherent, and in the worst forms by no means rapidly shed; hence the great masses of horny, black and altered epithelium that accumulate about the extensor side of the joints. Patients appear to suffer from exposure, and especially from cold east winds, which aggravate the excessive dryness of the skin. On the other hand the extreme of heat is sometimes equally trying to them, inasmuch as they are not relieved by perspiration.

Besides general ichthyosis, we occasionally meet with partial varieties of the malady, in which the malformation is limited to certain tracts of skin, as, for example, the extensor sides of the limbs. In cases of partial ichthyosis the healthy skin perspires freely, while the affected parts are perfectly dry. I had not long ago under my care a boy suffering from xeroderma, who perspired nowhere but on the scalp, and there the excretion was very profuse, as if to make up for the defective action of other parts.

Although ichthyosis, in its severest form, can hardly be regarded as a dangerous malady, yet I am inclined to think it might prove a serious addition to kidney-disease or bronchitis, by which the patient would be deprived of the valuable relief which is afforded to the distressed organs by the increased functional activity of the skin. Again, it has been noticed that the severe forms of the disease often end sooner or later in general emaciation and tuberculosis.

As I have already pointed out, ichthyosis is a disease of mal-development and hypertrophy of certain parts of the skin, and in accordance with this view we find on examination that the papillæ are enlarged and distended with cells, that the cutis vera is hypertrophied, and the epidermis greatly thickened with superimposed layers of scales. The black appearance of these scales is in part the result of age, and due to the accumulation of minute particles of dust which blacken the surface and penetrate the cracks of the cuticle, and thus become incorporated with it. There is in some cases an unusual development of pigment granules in the Malpighian layer. The glandular structures of the skin are functionally, if not anatomically, imperfect, as is evinced by the defective action of the sebaceous and sweat glands; and further, the mal-development sometimes extends to the appendages of the skin, such as the nails and hair; and cases have been met with where the eyebrows and eyelashes were congenitally deficient. The late Mr. Naylor has called attention to the fact that the external ear, especially the lobe, is often malformed.

The scaly masses consist of epithelium undergoing fatty change and mixed with sebaceous matter and dirt. By treating them

1. With alcohol, Schlossberger obtained fat granules, cholestearine plates and crystals of stearine and hippuric acid.

2. By the action of ether on the mass which had been already treated with alcohol, he obtained fluid fat and stearine in considerable quantities.

3. The mass being further digested with water yielded a little organic matter and some salts.

4. The ash contained chlorides of sodium and potassium with phosphates of iron, lime and magnesia.

Differential diagnosis.—Severe cases of steatorrhœa, in which the scales become black from age and dirt, may be mistaken for true ichthyosis. The consideration of the following points will aid the diagnosis: (1) These forms of steatorrhœa are always local affections. (2) They are not necessarily congenital, but may be acquired at any age. (3) When the scaly masses are stripped off, the skin underneath will be found free from hypertrophy. (4) They may be cured by appropriate treatment, which is not the case with ichthyosis.

Xeroderma, that is, ichthyosis in its mildest form, may be mistaken for other scaly skin affections, such as dry eczema, psoriasis, seborrhœa sicca or pityriasis. The following characters will serve to distinguish it: (1) The history of the case—xeroderma, like ichthyosis, is always developed at an early age, and is permanent. (2) There is a complete absence of subjective sensations, such as itching, burning, &c. (3) The perspiratory functions are impaired.

There is a congenital affection of the skin closely allied to xeroderma, which shows itself simply as an hypertrophied condition of the follicles without any attendant scaliness; the skin, both in appearance and to the touch, reminds one of a nutmeg-grater. This affection might possibly be mistaken for some of the more active papular eruptions; but it is congenital and permanent, and is met with most commonly in families subject to xeroderma. It occurs chiefly on the shoulders and outer and back part of the upper arm. The affection is allied to Willan's *lichen pilaris*, but differs in being congenital, whereas the latter is an acquired disease. I would suggest the name *follicular xeroderma.*

Treatment.—From the foregoing account of ichthyosis and xeroderma, it will be at once inferred that they are, strictly speaking, incurable diseases. We cannot expect to change the original development and subsequent altered growth of the skin, yet we can easily prevent some of the consequences of this defect. The treatment is simple and effective. The free use of alkaline baths, together with the thorough inunction of glycerine every night and morning, in cases of xeroderma, is sufficient to keep the skin soft and comfortable; but it will not effect a complete cure, for if the application of glycerine is discontinued, the harsh scaly condition will return. In typical ichthyosis the scales should be removed by the continued use, night and day, of a weak lotion of liq. potassæ and water (℥j ad Oss) applied constantly on lint under thin gutta-percha; this softens the scaly masses, which may then be easily rubbed off from time to time. The subsequent treatment should consist of washing with soft soap and warm water, with plenty of friction, the frequent use of alkaline baths, and the daily inunction of glycerine. This plan never fails to keep the skin in a tolerably soft condition, and entirely prevents the black scales from accumulating.

REFERENCE TO PLATES.

Ichthyosis. Hebra's Atlas, Heft iii. Tafeln 1 and 10 (good); Fox's Atlas, plate 49 (good).

2. *Circumscribed.*

Molluscum fibrosum—Elephantiasis telangiectodes—Nævus.

MOLLUSCUM FIBROSUM.

Syn. *Molluscum simplex, Molluscum pendulum, Fibroma.*

This disease consists of small tumours of fibrous tissue springing from the subcutaneous connective tissue. Some of these may remain undeveloped, and though not visible to the eye, can be felt by passing the hand over the skin. Others form sessile, or not uncommonly pedunculated and pendulous little tumours, somewhat egg-shaped and covered with normal skin. The size of these little growths varies from that of a small pea to a filbert, sometimes they attain the dimensions of a hen's egg or even larger, but this is very exceptional; the skin covering them is of the natural colour or perhaps rather more vascular than usual, and the consistency of the tumour is soft, but at the same time firm on pressure. The affection is quite unattended with pain or subjective sensations of any kind. Single little pedunculated tumours of this kind are not very uncommon, but cases in which large numbers are developed on different parts of the body are certainly rare. Similar growths are occasionally met with on the mucous membrane of the mouth. It is highly probable that these outgrowths exist in an undeveloped form at the time of birth, though they may be too small to be detected. At all events it is certain that they show themselves at a very early age. When fully developed, they have no tendency to undergo further changes, such as those of ulceration or degeneration, but remain stationary during life. Rokitansky says the tumours of *molluscum simplex* 'consist of a protrusion of the corium which is pushed forwards by an accumulation of young, gelatinous, connective tissue, in one of its deepest meshes. This new growth increases in size, and develops into a mass of fibrous texture, which is separated from the surrounding tissue, and may, as it were, be shelled out from the bag of skin in the form of a fibrous tumour. The hair follicles and the sebaceous glands have been already included in the tumour.'

Differential diagnosis.—The peculiar shape, appearance and consistency of these tumours, especially when they are pedunculated, renders the diagnosis easy. They must not, of course, be confounded with *molluscum contagiosum*, with which they have no relation, and from which they may be distinguished by the 'milky contents' and slight umbilication of the latter, as well as by their general appearance and history. Hebra rightly lays some stress on the fact that *molluscum fibrosum* occurs for the most part in those who are, in other respects, imperfectly developed both in mind and body.

Treatment.—The best plan is to snip them off with a pair of scissors.

Reference to Plates.

Fibroma. Syd. Soc.'s Atlas, plate 18; Fox's Atlas, plate 69.

ELEPHANTIASIS TELANGIECTODES.

Under this name Virchow and Kaposi have described a peculiar form of fibro-vascular hypertrophy, the origin of which is, for the most part, congenital, but which often does not fully develop until some time after birth. The growths first appear as defined lobulated tumours, well supplied with blood-vessels, but subsequently develop into more diffuse hypertrophic growths, sometimes spreading over considerable tracts of skin. These structures really belong to the subcutaneous connective tissue from which they spring, and with the growth of the fibrous element is also developed what we must regard as their characteristic feature, namely, a large quantity of vascular tissue. The vessels anastomose freely, and often become varicose, and sometimes form irregular spaces containing blood. The relative proportion of fibrous and vascular tissue varies much in different tumours and also in different parts of the same tumour.

There can, I think, be little doubt that these growths are closely allied to the more common *molluscum fibrosum*, and this view is, in my opinion, confirmed by a case that occurred in the Children's Hospital, under Dr. West, and of which I made a careful examination when under the care of my friend, the late Dr. John Murray, at the Highgate Hospital. This case was most carefully described in a paper by Dr. Murray, and a short account of it is given by Dr. T. Fox. The growths occurred in a half-witted child, and were of two kinds, (1) lobulated fibro-vascular growths, especially well seen on the ends of the fingers, and (2) ordinary fibrous molluscum on some other parts of the body. I regard this case as well illustrating the connection which exists between the peculiar *fibro-vascular growths* and *molluscum fibrosum.*

NÆVUS.

Nævus is essentially a vascular growth, although the term is sometimes applied in a less restricted sense. There are two common forms of nævoid growths: 1. *Telangiectasis*, 2. *Nævus vascularis*.

Telangiectases are small *acquired* vascular growths, that is, they are developed after birth in contradistinction to the *Nævus* proper, which is *congenital*. They make their appearance in two forms, either as small *flat* vascular spots of the size of a pin's head or larger, of a bright red or violet colour, having no well-defined border, but the little vessels are easily seen radiating, as it were, from a bright centre. The other common form consists of small, *prominent*, circumscribed vascular growths, varying in size from a pin's head to a pea, soft and elastic. By pressure of the fingers the blood is easily removed from the vessels, which fact, together with their general appearance and the absence of all inflammation, renders the diagnosis easy. They develop without any apparent cause, especially about the face, and are more common in people of middle age than in the young.

Nævus vascularis is a *congenital* mark, consisting of an abnormal overgrowth of cutaneous vascular tissue. Nævi present great varieties of colour, form and size; they may be bright red, livid or even a bluish grey, and of sizes ranging from a pin's head to the palm of the hand. Some are not at all raised above the surface of the surrounding normal skin, while others are distinctly raised and slightly tuberculated. They are generally pretty sharply defined, and present a marked contrast to the neighbouring pale skin. They occur for the most part on the head, trunk or arms, more rarely on the legs. The diagnosis is usually quite unattended with difficulty.

GROUP 4.—ANOMALIES OF PIGMENTATION.

Leucoderma—Ephelis—Lentigo—Chloasma—Melasma—Canities.

It is well known that the healthy human skin presents examples of almost every shade of brown and olive, from the palest tint as seen in the European to the deep brown of the Negro, and that this difference of colour is in part due to the variable quantity of pigment that exists in the cells of the *rete malpighii*, and in part to the greater transparency of the skin in proportion to the diminution of this pigment, so that in the fairest races the colour of the blood is more apparent; and further, that in the same race and even family minor variations in pigmentation are constantly met with in different individuals. Besides these congenital differences of colour in people of the same race, we also meet with variations occurring from time to time in the same individual which are simply of a physiological kind, and generally due to varying degrees of exposure to light and heat. For example, a few months' exposure in a tropical country will change the colour of a European to a rich brown, and this alteration in pigmentation is not confined to the skin; the hair that is exposed to the sun participates in the change, though to a less degree. Taking these facts into consideration, it is not surprising that we should occasionally find curious anomalies in the pigmentation of the skin, some of which are compatible with the most perfect health, while others are symptomatic of disease.

Among the most common and important causes of abnormal pigmentation must be mentioned chronic irritation and inflammation; this is well illustrated after a cantharides blister has been applied to the skin, and kept open for some weeks with savine ointment; when at last it is allowed to heal, a brownish mark is left which may remain for months. A similar effect is produced on a larger scale by the irritation of prurigo, pediculi, and scratching, so that in extreme cases the naturally white skin becomes of an opaque brown colour. Again, in old people who are from day to day sitting in the same position near a fire, we find the sides of the legs turned towards the fire become of a darker colour than the rest of the skin, and that this is due to an increase in the pigmentation from constant roasting.

Besides the above examples of altered pigmentation, which may be called *idiopathic*, there are a vast number of a *symptomatic* kind, both physiological and pathological. Some of the natural processes going on in the animal economy are attended with pigmentary changes, as, for example, those occurring in the areolæ of the breasts of pregnant women. A large number of diseases are associated with alterations in the skin pigments; amongst the more important of these may be mentioned erythema, chronic eczema, psoriasis, syphilis, elephantiasis græcorum, and morbus Addisonii. In the case of the three latter diseases, the alterations in the colour of the skin often form a striking and sometimes a diagnostic feature of the disease. In addition to those anomalies of pigmentation to which I have referred, and which may be regarded as symptomatic, others are met with in which the abnormal development of colouring matter is the primary and sole feature of the affection; in some there is an increase, and in others a decrease in the normal amount, while in not a few cases both characters are combined, constituting an irregular distribution of pigment. To the most important disease of this class the name leucoderma is applied, and I include under this term all kinds of irregular pigmentation in which white leucodermic patches are the chief characteristic.

Leucodermic affections may be divided for convenience into two classes: those which are *congenital*, and those which are *acquired*. The former consist of pigmentless patches of white skin or hair which remain unchanged during life. Sometimes the malformation exists in a severe form, and we have an absence of pigment, not only from the whole of the cutaneous structure, but also from the choroid, so that the pupil of the eye has a pink appearance, due to the choroidal vessels which are illuminated with transmitted light through the translucent sclerotic. Persons suffering from this congenital defect are known as Albinos; the same condition is common in some animals, as, for example, in white mice and rabbits. These affections belong to the class of malformations rather than to *leucoderma* proper, from which they differ in two important points: (1) they are *congenital*, and (2) they are stationary.

LEUCODERMA.

Syn. *Leucasmus, Vitiligo.*

This disease may be defined as a purely local affection of the skin, in which sharply defined, rounded, white patches are developed. These patches are perfectly smooth, and on the same level as the neighbouring skin; they are usually surrounded by an abnormally dark border which gradually shades off into the natural skin beyond. The disease gives a strikingly mottled or piebald appearance to the individual, but leads to no other changes either local or general. The spots are produced by a gradual disappearance of pigment; at first they are small, but gradually spread at their circumference, until in the course of years they may occupy very large areas or even cover the whole body—the hairs usually participating in this pigmentary change. I have noticed that sponging the parts affected with cold water temporarily heightens the effect of contrast between the white spots and the surrounding border, and this fact must, I think, be due to the emptying of the small vessels, which is more observable through the now transparent white cuticle than in the pigmented skin around.

This affection is very common in dark oriental races and in Africans, and is far from rare in Europeans, though even here it is especially met with in people of naturally dark complexion. In estimating its relative frequency, however, it must not be forgotten that it is more easily seen on a dark than on a fair skin. Mr. Hutchinson has given an account of several typical instances in the first volume of the London Hospital Reports; and slight forms of leucoderma are of common occurrence. I have myself met with a few well-marked cases, and several in which, without any apparent cause, an abruptly defined patch of hair became perfectly white for a time, though it retained a vigorous growth and subsequently recovered its normal colour. Cases of this kind are closely allied to those of true leucoderma, but in my experience differ in this respect, that they are much more often only temporary changes.

The following points are worthy of notice. (1) Leucoderma in Europe is a local affection, and is quite unattended with constitutional symptoms of any kind. (2) It may develop at any period of life, but is more common after puberty. Its development is probably favoured by residence in a tropical climate. (3) As a rule, the white patches are quite devoid of pigment, and present a sharply defined convex border; this is not, however, invariably the case. I have met a lad of English parentage but born in India, in whom the leucodermic patches were shaded off at the margin so as to give a marbled or mottled appearance to the skin. (4) The hairs on the part affected are generally, though not always, perfectly white, but in other respects the skin is natural. (5) The skin around the white patch often contains a larger amount of pigment than the rest of the unaffected skin. There is, in fact, an irregular distribution of pigment. In determining this point, it is necessary to make a very careful examination, as the eye is easily deceived into the belief that there is an increase of colouring matter, whenever the contrast between the white patch and the dark skin is well-marked.[1] (6) In typical cases there is an irregular symmetry (if I may use the expression), or, in other words, well-marked unilateral leucoderma is almost unknown, at least in this country. Small isolated patches on one side of the body are, however, not uncommon.

White Leprosy.—There is some difference of opinion amongst the Indian medical writers of the day, as to the relationship which exists between 'white' and 'true' leprosy; but a large majority is of opinion that the two are quite distinct. The contrary supposition in some instances may be explained by the fact that the two diseases sometimes occur in the same individual, and such cases would give colour to the opinion that the one disease passes or develops into the other. Again, by some observers true macular leprosy may have been mistaken for 'white leprosy,' and thus have led to the belief that the two were related.

'White leprosy' is evidently a severe form of leucoderma, the tendency to which is hereditary; it is more common in adults than in children. It is very prevalent in leprous districts, and may possibly be affected by the same endemic influences as the more serious malady; but, whatever may be the origin of the leucodermic affection, it is essentially distinct from true leprosy.

Medical writers in the Madras Presidency describe the disease as commencing insidiously with spots on the extremities, trunk, or face, which enlarge without structural change, and without much functional derangement of the skin, occasionally increasing to such an extent as to assimilate the dark skin of a native to that of a fair European. It is occasionally combined with true leprosy, but when uncomplicated it leads to no impairment of the health, neither does it induce the ulcerations and mutilations which accompany that disease. This white or Jewish leprosy, as it is sometimes called, prevails extensively in Ceylon, particularly in the north-western province. A medical writer in that island describes it as characterised by a peculiar marbled appearance of the skin. It generally begins on the hands and lower extremities, and occasionally on other parts of the body, in the form of small white dots, which gradually enlarge and extend over the whole surface. It not unfrequently shows itself on the lower lip, whence it spreads to the face, and the hair on the affected parts becomes quite white; the spots are sometimes of a grey or dusky hue, and often remain stationary for a long time, but when they once begin to assume an active state of development they rapidly extend so as to cover the whole body with large irregular white patches, which disfigure the individual very much. Although the disease produces a striking appearance in its advanced stage, yet it causes no inconvenience to the patient, and is unattended with physical suffering.

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[1] In order to test the increase of pigment, a piece of paper may be placed over the part, with two holes cut in it, one over the pigmented and the other over the natural skin beyond; by this means the amount of change can be better estimated.

The differential diagnosis of leucoderma is not difficult; it has, however, as I have already indicated, been occasionally confounded with *elephantiasis græcorum* in its early stage, when the latter disease sometimes gives rise to white spots on the skin, but these are always accompanied by distinct darkened patches, and are not sharply defined as in leucoderma, but shaded and of irregular shape. They are, moreover, often anæsthetic. In *elephantiasis græcorum* we have also to guide us the general constitutional symptoms of the disease, which are never present in leucoderma. My friend, Mr. Erasmus Wilson, has pointed out to me cases of apparent leucoderma, in which there is a distinct fibrous change in the skin, which leads to the formation of white patches by the obliteration of the small vessels and other consequent changes. The appearance produced is very similar to that of ordinary leucoderma, but the nature of the change is different, and would seem to ally this affection with mild forms of scleroderma.

PIGMENT SPOTS.

The names ephelis, lentigo, chloasma and melasma are all applied to acquired pigment spots, in contradistinction to those which are congenital and which belong properly to the group of pigmentary nævi. There is some confusion in our nomenclature as to the use of these different names. Ephelis has been usually applied to what are called *sun-freckles*, and lentigo to similar small pigment-spots in the development of which the sun has played no part. It is, however, believed by some observers that the sun never produces freckles *de novo*, but only increases the pigment in those that already exist, and it cannot be denied that this is generally the case, though it is very difficult to prove it in all instances. But, whether absolutely true or not, the distinction between ephelis and lentigo is not worth retaining, and in future it will be well to regard the two names as synonymous.

Lentigines or ephelides are small pigmentary spots usually met with on the face and backs of the hands, especially in fair and red-haired people. They vary in size from a pin's head to a lentil, and are of a yellowish colour. They are never found in very young children. They become darker during the summer, but do not usually disappear entirely in the winter months; they are of no pathological importance, and can scarcely be mistaken for any other affection.

The name *chloasma* was formerly used as a synonym for *pityriasis versicolor*, from which it must be carefully distinguished. Chloasmata are pigment spots of larger size than lentigines, and are of more pathological interest. They usually appear as yellowish or brownish patches on the forehead, neck, or trunk, having a sharply defined border. The commonest kind is met with in women, and called *chloasma uterinum.* It generally appears as a broad band which extends across the forehead in women who are pregnant, or who are suffering from some uterine disturbance, functional or organic. Sometimes, instead of a continuous band, we meet with irregular patches on the forehead, and occasionally we find similar patches on the cheeks and abdomen; but they are much less common in these regions. These pigmentary changes never occur before puberty, and disappear when the uterus and ovaries have finally ceased to perform their physiological functions.

There are only two affections with which chloasma can be confounded—(1) *pityriasis versicolor*, (2) *pigmentary syphilitic maculæ.* From the former it is distinguished by the following characters: (1) *pityriasis versicolor* is most common on the trunk, and does not attack the forehead or face, which are the most common localities for chloasma; (2) *pityriasis versicolor* is slightly scaly, and the scales can be easily removed, treated with a little liq. potassæ, and examined under the microscope; the epidermis of a patch of chloasma is usually perfectly smooth. It is sometimes a little difficult to distinguish yellowish syphilitic spots on the forehead from chloasmata. Our chief guide must be the history of the case, and the presence or absence of all other symptoms of syphilis.

Treatment.—On this point Neumann gives the following directions: 'The removal of pigment is easily effected by such remedies as induce superficial inflammation of the skin, and consequent shedding of the epidermis. With this view a solution consisting of five grains of corrosive sublimate to one ounce of water may be applied. The pigmented part of the skin is covered with accurately fitting pieces of linen, and is kept moist with the solution for three hours. The edge of the dressing must be continually torn away in order to avoid accumulation of the solution, which would cauterise the skin too deeply. Repeated painting with tincture of iodine or a solution of iodised glycerine or of corrosive sublimate in collodion are also attended with similar results.'

Few people will submit, however, to the vigorous treatment recommended above, and I generally find that an equally satisfactory result may be obtained by the application on rag or lint of a lotion of hydrochlorate of ammonia (13), together with a very small quantity (gr. iij ad ℥viij) of the perchloride of mercury. In some cases brown pigment spots and freckles may be removed by the hypochloride of sulphur ointment (43), or a hyposulphite of soda lotion (14); but, whatever plan of treatment be adopted, the spot, if removed, is rather apt to return.

REFERENCE TO PLATES.

Leucoderma. Syd. Soc.'s Atlas, plate 10; Cazenave's Atlas, plate 35 (Vitiligo).

CANITIES.

Canities, or greyness of the hair, is the result of a deficient supply of pigments, and may be either *congenital* or *acquired.* The most complete congenital canities is found in Albinos, in whom there is an absence of pigment from the skin and choroid as well as the hair. Partial congenital canities is generally met with in the form of a tuft or lock of white hair in the scalp or beard, surrounded by others of a normal colour.

With regard to the acquired canities, we must be prepared to meet with it under the various circumstances and conditions which interfere with the nutrition of the hair. Its production as a senile change is familiar to everyone, while its premature occurrence in young men, without any very apparent cause, is by no means uncommon. Greyness of this kind is, perhaps, more apparent in people with dark, than in those with light hair, and is certainly hereditary in some families. There are other forms of premature greyness which are more distinctly of a pathological nature, and the result of those diseases which especially affect the nutrition and development of the hair. Among the more common may be mentioned chronic neuralgia of the scalp, in which the greyness, when it exists, is always unilateral and generally localised to the region of distribution of some particular nerve. At the present time I have under my care a young lady who has a white patch of hair over the left temporal region, which has developed in consequence of a severe neuralgia affecting that part. The fact that people sometimes turn grey in a single night from mental shock or intense anxiety has been very strongly attested, but at present no satisfactory explanation has been offered as to how this sudden change is brought about. Admitting for a moment the fact, the only possible hypothesis yet suggested is, that, under certain peculiar circumstances, the perspiration may acquire powerful bleaching properties; and in harmony with this view, it is held by some observers that early greyness, which is more common in tropical than in temperate climates, is due to the bleaching properties of ordinary sweat with which the hair is often saturated. Be this as it may, we are quite certain that greyness is not usually produced in this way; on the contrary, it results not from a change in the colour of pigment already developed, but in an arrest of the progress of pigmentary development. And this accords with the fact, that greyness shows itself first near the root of the hair, while the distal or first grown portion may retain its natural colour. At other times a normal hair is shed and replaced by one which is perfectly grey.

A curious and rare variety of canities is sometimes met with in the form of 'ringed' or banded hairs, which appear to be made up of alternate pieces of dark and white hair; to the naked eye this gives them a spotted or speckled appearance. It has been suggested that the dark portions have grown during the day and the white at night, but careful observation has shown that the length of the ring does not always correspond to the growth of a few hours, but must in some cases have occupied a much longer time. The white rings are apparently due to the presence of air bubbles in the hair, for when these are got rid of by saturation of fluids they disappear. This explanation is, however, not accepted by some observers, who hold that the ringed hairs are produced by an unequal development of pigment, and that they are, therefore, only peculiar forms of really grey hair.

Dr. Walter Smith, of Dublin, has described in the 'British Medical Journal' of May 1, 1880, two cases of an acquired 'nodose condition of the hair,' in which a series of spindle-shaped enlargements is developed. Fracture of the hair is apt to occur *between* the nodes. I have met with one similar case.

CHAPTER VII.

CLASS V.—*NEW FORMATIONS.*

Lupus vulgaris—Lupus erythematosus—Epithelioma—Keloid —Xanthoma—Molluscum contagiosum.

LUPUS VULGARIS.

Syn. *Lupus exedens.*

Definition.—Lupus vulgaris is a very chronic non-contagious disease of the skin and mucous membrane, consisting of a new cell-growth, developed in the corium in the form of tubercles, which grow very slowly and subsequently disappear by ulceration, leading to a destruction of a portion of the skin and the formation of well-marked scars.

Lupus is essentially a disease developed in early life, but is never congenital, and rarely seen in children under two years of age. It makes its first appearance before puberty, but when once it has developed it may subside for years, and then re-appear again later on in life. Its tendency is to get well spontaneously as age advances beyond middle life. The disease belongs rather to the scrofulous diathesis, but, if we may judge by statistics, is not hereditary. It is slightly more common in females than in males, but not to the same marked extent as *lupus erythematosus.* Several qualifying names have been applied to *lupus vulgaris* which have reference to the degree of its development, rather than to any real variations in the disease: thus we have *lupus tuberculosus,* which is a stage when prominent tubercles appear on the skin; the terms *exedens* and *exulcerans* indicate a somewhat later period when ulceration is present, while the name *lupus exfoliativus* is applied when the new growth undergoes interstitial disintegration and absorption; this change is associated with desquamation of cuticle, but not open ulceration. When exuberant granulations develop about an ulcer, the name *lupus hypertrophicus* is sometimes used. *Serpiginous lupus* I shall refer to further on.

Symptoms.—Lupus is always developed in the form of small round tubercles which are situated at first in the corium; they are about as large as small shot, but gradually increase in size until they may attain the dimensions of a pea or even larger. When small they are of a reddish colour, and can be seen but not felt through the more or less transparent cuticle, which at this stage is on a level with the surrounding skin; this condition, however, undergoes a further change, for as the tubercles enlarge they push the cuticle before them, and at the same time stretch it so as to form a smooth shiny surface. Thus we have produced prominent, firm, elastic and sometimes semi-transparent nodules, free from pain and easily felt as well as seen. As they increase in numbers and size they become more or less united, resulting in a smooth but irregularly nodulated surface, which usually becomes covered with white desquamating epithelium. At this stage the disease often remains for a long time almost stationary, but sooner or later one of two changes occurs. Firstly, the tubercles may slowly atrophy and undergo a general absorption, the cuticle, at the same time, becoming wrinkled and freely desquamating, and sometimes cracked and crusted, but without the formation of open ulcers. As the tissues become atrophied, a glistening scar is left. Secondly, instead of the above described changes, the tubercles may soften, disintegrate and become converted into a cheesy purulent matter; this breaking up of the new growth invariably leads to the formation of open sores or ulcers, often of irregular shape, with soft, well-defined margins and a red and easily bleeding surface. This ulceration destroys both the lupus tissue and also the skin itself to a depth which depends on the extent to which the corium is infiltrated by the new cell-growth. The ulcers granulate and heal in the usual way, but the process is very slow and is often interfered with by the development of new lupus tubercles. The two processes of involution which I have indicated above, namely (1) atrophy and desquamation, and (2) ulceration, may go on together, indeed they are often associated in the same patch of lupus. The cicatrices which follow this destruction of tissue are peculiar, and sometimes assist in the diagnosis of the disease; they are always thick, dense and solid, and have very little tendency to contract; in this respect they differ from most other scars.

A knowledge of the parts usually attacked by lupus is of some slight value for the purposes of diagnosis. The disease occurs most frequently on the face, especially the nose and cheeks; it is rarely met with on the scalp. When it attacks the nose it very often spreads to the mucous membrane. From the face it may extend to any of the neighbouring regions. When lupus attacks the trunk or extremities it generally takes the *serpiginous* form. The tendency of the disease is always to invade new tissue, and we constantly find fresh tubercles formed at the margin of old patches, while the more central ones have undergone or are undergoing involution, so that there is always an extension at the circumference, and thus imperfect rings or curved lines of active lupus are formed; where these intersect we have a gyrate border produced; this variety of the disease is usually designated *lupus serpiginosus*.

To recapitulate briefly: (1) *Lupus vulgaris first* appears between the age of two years and puberty; the exceptions to this rule are very rare. (2) It is especially met with in those of a scrofulous diathesis. (3) It is seldom seen in an active condition after the age of fifty-five. (4) It is especially liable to attack the face, and when it invades other parts of the body it is often also present on the face. (5) It appears first in the form of tubercles, which have a tendency to ulcerate, and invariably leave indelible scars. (6) The extremely chronic nature of the disease, often lasting for many years, is a characteristic feature.

Differential diagnosis.—There can be no doubt that the diagnosis between lupus and certain forms of syphilis is sometimes very difficult; indeed some writers still acknowledge a *syphilitic lupus*, but this generally means a syphilitic eruption closely resembling lupus. There is a great plausibility, however, in the hypothesis that lupus may attack a child who has inherited a syphilitic taint, and be consequently modified in its course, while it still retains the essential characters of a true lupus. Lupus that attacks the nose and leads to a considerable destruction of tissue often bears a close resemblance to syphilis. The same remark is true of the serpiginous form that attacks the extremities. The *very slow development and progress* of the disease, as compared with syphilis, is a most important point of distinction. Again, in a doubtful case the complete failure of antisyphilitic remedies may sometimes be a valuable indication that we have to deal with a case of lupus and not syphilis. The appearance of a lupus ulcer differs from that of a syphilitic one; the border is often irregular, and not so sharply cut, the ulcer is not as deep, and bleeds more easily and freely, especially at the margin. The presence of a flat isolated lupus nodule in the neighbourhood of an ulcer or in cases of the serpiginous form will be a valuable aid to diagnosis. Lastly, we may find a history, or some general symptoms of constitutional syphilis, to guide us in arriving at a right conclusion in any given case.

The diagnosis between *lupus* and *epithelioma* is much less difficult; for lupus, though it may continue or reappear until middle life, almost always *first* shows itself at an early age, and leaves marks in the skin that cannot be overlooked; this is, of course, not the case with epithelioma, which is seldom met with before the age of thirty, and never in children. The mode of development of the two diseases is also quite different. Epithelioma is more circumscribed, and begins from a single tubercle, lupus from several, and the thick brown crusts which form on a lupus ulcer are never seen on an epitheliomatous sore.

It is well to remember that *lupus vulgaris* is liable to be complicated with erysipelas, and it has been noticed that the most favourable results in arresting the progress of the disease sometimes follow one of these erysipelatous attacks.

Treatment.—The general treatment of *lupus vulgaris* consists in adopting all those measures which promote the general health of the patient. Amongst the most important of these are: (1) a nutritious diet, with plenty of milk and other animal food, and in most cases a little bitter ale or stout; (2) frequent changes of air to some dry, hilly district, but not usually to the seaside; (3) the administration of those tonics which are found to suit the individual case. Cod liver oil is generally well borne during the winter and early spring, which is always the most trying time for the sufferer, and whenever it is easily digested it invariably does good. The different forms of iron, especially the iodide, either with or without small doses of arsenic, are amongst the best medicines. It is, however, in the *local* treatment of lupus that the chief difficulties arise. The object of all active local treatment is to get rid of or destroy the lupus tissue, and to promote the formation of a healthy scar, by which means the progress of the disease is arrested. Of all kinds of local treatment, that is the worst which only irritates, hence the use of stimulating and irritating applications is contra-indicated. There are three principal modes of procedure: (1) the entire removal of the lupus by means of the knife; this is the most satisfactory method when it can be conveniently applied; (2) the scraping away the lupus tissue, so as to get a healthy sore, which will form a firm cicatrix; (3) the plan of destroying the unhealthy growth by means of caustics; the last mode is the one most commonly adopted. Various caustics have been recommended for this purpose. I find that equal parts of potassa fusa and distilled water is the one that is most easily managed, and, on the whole, the most generally useful. Hebra uses largely the solid nitrate of silver. The late Mr. Startin generally applied an arsenical paste; the late Dr. Tilbury Fox recommended 'nitrate of zinc, ℥iss; distilled water, ℥j; glycerine of starch, ℥j; wheat flour, ℥j, made into a paste. The patch is covered with a layer of the paste freshly made, and if much pain ensues a poultice is applied.' The acid nitrate of mercury is used by many, and is certainly a good caustic, but I give the preference to potassa fusa and water (5). Whatever caustic is used, it should be *freely* but *not frequently* applied; once a fortnight is generally often enough, and during the interval the lupus patch should never be irritated; it may be painted now and then with a little thick calamine lotion, but should be touched as little as possible. The summer time is by far the best season for the active treatment of lupus; during the winter palliative means and general treatment may be adopted. The application of iodide of starch paste (28) or some mild mercurial ointment may be tried locally with advantage, but nothing that is found to irritate should be used.

Reference to Plates.

Lupus vulgaris. Hebra's Atlas (many excellent plates); Syd. Soc.'s Atlas, plate 19; Fox's Atlas, plates 46–48; Cazenave's Atlas, plates 44 and 46.

LUPUS ERYTHEMATOSUS.

Syn. *Lupus sebaceus, Lupus erythematodes, Lupus superficialis.*

This disease was first correctly described in 1851 by Casenave as a superficial form of lupus; but its existence was known before that time, and many of its clinical features were recorded by Erichsen, Hebra, and others, who regarded the disease as a peculiar form of seborrhœa. This mistake is easily explained by the fact that the affection often begins by a congestion of the sebaceous glands and follicles, with an accumulation of sebaceous matter; that it does not always originate, however, in these tissues, is proved by the fact that it has been met with on the palm of the hand, where no sebaceous glands exist. The essential feature of the disease is a peculiar inflammation of the superficial structures of the skin, attended with a cell-infiltration and a subsequent destruction of the sebaceous glands, follicles, and outer layer of the corium, which are replaced by a superficial scar; so that in fully developed erythematous lupus a permanent mark is invariably left, which, however, may in the course of years cease to be *visible.*

The disease is comparatively rare, and is never met with in infants or old people; the period of life which is most liable to it is that between the ages of eighteen and forty-five. It is much more common in women than in men, and is, I think, rather apt to attack those of languid circulation, who are subject to chilblains and cold hands and feet. A scrofulous diathesis predisposes to this as well as to the other forms of lupus, but not perhaps to the same marked extent. Although the disease is usually a purely local affection, it is occasionally met with in a more general form, and attended with well-marked constitutional symptoms.

Symptoms.—Lupus erythematosus is, as a rule, confined to the head, where it sometimes occurs as a butterfly-shaped patch, which passes across the bridge of the nose, and extends down both cheeks; or it may exist as scattered patches, which are met with commonly on the eyelids, tip of the nose, cheeks, and lobes of the ears, and somewhat less frequently on the mucous membrane of the nostrils, lips, gums, and tongue. Its presence on the eyebrows or scalp is always followed by loss of hair. It is exceptionamet with on some other parts of the body, especially on the hands; but in these cases it is also generally present on the face.

The diagnosis of the disease is most difficult in the early stages of its development, and this arises from the fact that its character at the outset is very variable. The following may be mentioned as some of its chief peculiarities in its early stages: (1) The first sign of the eruption may be simply an erythematous patch on the face, which is perhaps only temporary, lasting for a time and then disappearing, to return again ere long in a more persistent form; or several spots of erythema may appear, and while some quickly and entirely disappear, others remain. Gradually the edges of these patches become more sharply defined, and the central part covered with thin, white, adherent scales. This form or stage of eruption is always attended with sensations of itching and burning, which are aggravated by exposure to a cold wind or the warmth of a fire. I have one patient who often suffers from common eczema, in whom, during an attack of that disease, erythematous lupus developed in one of the spots on the tip of the nose, all the other eczematous patches disappearing completely, as usual, while this one alone remained persistent, and gradually altered in character (2) Sometimes, instead of a distinct erythematous patch as the commencement of the disease, we find at the outset small red, papule-like spots of about the size of a pin's head, scattered about the nose or cheeks; each of these spots corresponds to a follicle with its sebaceous glands; several of the little spots unite to form a small patch of lupus, which is covered with firmly adherent epithelial scales and sebum; at the margin of the patches the skin often appears dotted over with minute hard points of a greenish hue, reminding one of the rind of an orange; these points or dots are produced by the altered sebum plugging up the sebaceous glands. New lupus papules form around the original small patches, and so the disease extends at the circumference; meantime the central parts heal and cicatrise; as the disease still spreads at the margin, the intersection of two circular patches may lead to the formation of those gyrate lines of active lupus which we occasionally see. However the patch of lupus is formed, the subsequent changes are pretty constant. The border of the patch is always recognised as the active part; it is red, slightly raised, and often distinctly papulated, while the central part becomes a little depressed and cicatrix-like, and covered with thin white or yellowish-white scales, which are often greasy-looking and very adherent. At a later stage the border becomes paler and less prominent, the spots cease to spread, and all that remains is a slight superficial cicatricial atrophy of the skin. In the course of time the tissues destroyed may be so far replaced that no trace of the disease can be seen; nevertheless it must not be supposed that the skin is ever again normal in structure. (3) There is another and more severe form of erythematous lupus, which in its early stage may be very easily mistaken for eczema, on account of its crusted character and comparatively rapid development. It appears first on the face in the form of scattered spots covered by separate crusts; these are sometimes packed so closely together as to form a continuous patch, but even then the origin of the formation in *separate spots* can be seen in some parts. This mode of separate development helps one to distinguish it from an eczema. On attempting to remove the crust it is found to be closely adherent to the skin, and on its under surface a number of minute projections are seen, which dip into the follicles and produce an attachment so firm that the crust must be soaked with oil before it can be removed. When this has been done, a raw, irregular, bleeding surface is exposed. When the crusts have ceased to form, the nature of the disease can be more easily recognised by the structural alterations in the tissues which then become visible. The skin presents a peculiar mottled and dotted appearance from the changes in the follicles, and gradually a thin flat cicatrix forms, which becomes in time smooth and white, but never entirely disappears.

Although *erythematous lupus* is generally a strictly local and very chronic affection, requiring many months or years to develop and pass through its subsequent metamorphic changes, yet this is not invariably the case, for it sometimes begins with a sudden outbreak, and in the course of a few days or weeks a large number of spots may appear on different parts of the body, attended with considerable constitutional disturbance, such as pains in the bones and joints, and nocturnal headache resembling that due to syphilis, together with other febrile symptoms, which show that the whole system is affected. *Erythematous lupus*, as well as *lupus vulgaris*, is liable to be complicated with erysipelas.

To recapitulate briefly the points that should be especially remembered for the purpose of diagnosis, we have: (1) The disease is most common in early middle life, and is never seen in the very young or very old. (2) It is far more common in women than in men, and especially in those of a scrofulous constitution. (3) It is almost always (in its ordinary chronic form) confined to the head, especially the cheeks, nose, eyelids, and lobes of the ears; when it attacks the hairy parts it leaves bald patches. (4) The eruption in its early stages is attended with sensations of itching and burning. (5) The patches or spots at first sometimes resemble acne, but soon enlarge and become scaly, and then are more like spots of psoriasis or dry eczema, but round the margin are seen red papules and sebaceous glands and follicles plugged with sebum. (6) An atrophy of the superficial parts of the true skin occurs, followed by a kind of flat scar, so that a more or less permanent mark is left. (7) Open ulcers are never formed.

Treatment.—Superficial lupus is admitted by all to be one of the most difficult affections of the skin to deal with. A large proportion of cases do not respond readily to treatment, and the consequence is that patients are disappointed, and apt to change too frequently from one remedy to another, instead of steadily pursuing any one definite and consistent method. The constitutional treatment of this disease is simple; it consists in placing the patient on a highly nutritious and at the same time easily digested diet, of which animal food should form a considerable part. During cold weather cod liver oil should be taken daily, always provided that it does not disagree with the patient. With regard to tonics, they must be varied according to circumstances. I find empirically that very small doses of perchloride of mercury with cinchona often do good, but it is a medicine which must be used with discretion. A little iodide of potassium, with the syrup of the iodide of iron, is also a very useful and safe tonic. The ordinary quinine and iron mixtures are all more or less suitable, provided they do not disagree with the patient.

The following is the plan of *local* treatment recommended by Hebra. He begins with the removal of scales by means of oil and soft soap, rubbed especially into the margins of the diseased skin. When under this process the affected part becomes smoother and fewer depressions are seen on it, it is a sign that the disease is improving. After the removal of the scales Hebra cauterises the border of the lupus patch. He also recommends that soft soap be spread on a piece of flannel, and allowed to remain in contact with the skin; this is to be repeated for several days in succession, and then discontinued for a short time. The skin is then washed with water to see if the new epidermis is healthy; should it stand the washing, the disease may be considered cured; if it does not, the treatment must be repeated. The different preparations of tar, especially the liquor carbonis detergens, are remedies of some value; they should be applied daily, the old epidermis being rubbed off from time to time before fresh tar is used. My own experience is unfavourable to the use of caustics in this form of lupus, and in my opinion no remedy should be used which sets up much irritation of the skin. On the whole, I find the persistent use of the oleate of mercury ointment, of the strength of from three to five per cent., to be one of the best remedies; it should be well rubbed in twice a day, and if it produces much irritation the strength should be diminished; even two per cent. is sometimes strong enough. Useful applications of quite a different kind are the strong liquor plumbi or nitrate of silver solution, which should be painted on the spots once a day with a camel's hair brush; they act as powerful astringents, and are especially useful in the more vascular forms of the disease. Tincture of iodine has always been a favourite remedy, and in some cases it certainly does good, but it does not suit those attended with much irritation. In many instances even the mildest remedies seem rather to aggravate the mischief; under these circumstances it is better to use a soothing application, like the calamine and chalk lotion, and trust in the main to internal treatment, until the irritation of the skin has subsided, when the oleate of mercury ointment (41) may be used with advantage.

REFERENCE TO PLATES.

Lupus erythematosus. Hebra's Atlas, several good plates; Syd. Soc.'s Atlas, plate 42; Fox's Atlas, plate 45; Cazenave's Atlas, plate 42.

EPITHELIOMA.

Syn. *Rodent Ulcer.*

Superficial epithelial cancer is most frequently seen on the upper part of the face; its favourite seats are the temple, the side of the nose near the eye or the cheek just below the eyelid. In a slightly different form it attacks the lower lip, and is sometimes met with on the male organs of generation. The disease occurs only in adults, and not often before the age of forty. It may originate in a mole or in perfectly normal skin. It begins by the formation of a small, round, smooth translucent nodule of a pale yellowish colour; these nodules occur either singly or several together, which unite to form a raised, lobulated little growth, streaked and surrounded by the ramification of a few minute vessels; the size of the whole may be hardly as large as a split pea. At this stage the little glistening transparent growth presents a very characteristic appearance. If left to itself, the central part usually becomes excoriated, and a little discharge occurs which dries into a firmly adherent brown scab, but beyond the edge of this the typical rounded translucent border can still be seen. If the scab is removed, a small superficial ulcer is found beneath it, which has no tendency to heal. If a little of the contents be squeezed out of one of these translucent nodules and examined under a microscope, it is seen to be composed of accumulations of epithelial cells. The progress of the disease is at first very slow, indeed it may remain almost stationary for several years, causing no inconvenience to the patient, so that he does not seek advice until a later stage, when a roundish, sharply-cut superficial ulcer is formed; the ulcerated surface is of a reddish colour, granular and uneven: it bleeds easily, and secretes a sticky fluid, which first forms a glazed surface and then a thin dry scab. The ulcer extends at the margin by the formation of new transparent nodules; if none of these nodules exist, the diagnosis is by no means as easy as at the earlier stage. Sometimes the central part of the ulcer will cicatrise, while the circumference continues to spread; at other times, a little dark pigmentation occurs here and there in the ulcerated surface. The disease may last for ten or fifteen years without interfering with the health of the patient, or involving any of the lymphatic glands. In other cases it progresses more rapidly, and is apt to invade and destroy the eyelids and tissues around, though it seldom affects the eye itself.

When epithelioma attacks the lip it is almost always the lower one, and in this region it is apt to make more rapid and serious progress than on the skin of the face. It often begins at the point where the mouthpiece of a pipe touches the lip, as a superficial excoriation covered by a thin scab, without any apparent hardness, the tissues around seeming quite natural, but the sore will not heal. Sometimes it begins as a dry, wart-like growth, at first quite superficial, but soon becoming hard at the base. In both these forms the lip, if left to itself, becomes hard and thickened, and sometimes drawn down and everted. On the genital organs the scrotum, skin of the penis, or glans may be attacked, and in the latter case, when an ulcer is formed, it may possibly be mistaken for a syphilitic sore.

Differential diagnosis.—When epithelioma exists as a small semi-transparent nodule on which minute vessels are seen ramifying, or as a superficial little ulcer with a rounded translucent margin, it cannot be mistaken for any other disease. In the absence of these distinctive characters, it may be mistaken for syphilis or lupus, or a simple warty growth. In the differential diagnosis from syphilis, the general history and age of the patient will be of value, and in many doubtful cases a microscopical examination will determine the point. The *single character* of the ulcer in epithelioma is an important diagnostic feature. Again, ulcerating lupus very seldom commences *after* the age of thirty, while epithelioma is very uncommon *before* that age. It is also well to remember that, of the three kinds of ulceration, namely, syphilitic, lupoid, and cancerous, the first is, as a rule, the least painful.

Rodent Ulcer.—The question as to the distinctions between epithelial cancer of the skin and rodent ulcer is still *sub judice.* Continental observers regard the two as simply varieties of the same disease, and there can be no doubt that *typical rodent ulcer often becomes typical epithelioma.* I have had several opportunities of watching cases of the kind through a long course of years, in which this transformation, if I may use the expression, took place, but this does not quite prove the identity of the two diseases.

Treatment.—The treatment of epithelioma of the skin consists in its complete destruction at as early a stage as possible. When small it may without difficulty be destroyed by nitric acid or potassa fusa, care being taken to do the work thoroughly. The scar should be watched, and if the disease returns, as it often does, it should be immediately destroyed again. If these cases are recognised at an early stage, their progress may be entirely stopped, and subsequently kept in check by a little care.

Reference to Plates.

Fox's Atlas, plate 50, 'Rodent Ulcer.'

KELOID.

Syn. *Kelis, Cheloid, Cheloma.*

Definition.—Keloid is a peculiar fibrous-tissue new-growth of the corium, having a general scar-like appearance, and attended with more or less pain and tenderness on pressure.

Alibert first described this disease under the name of cancroid, but subsequently changed the name to cheloid, from a supposed resemblance to a crab with outstretched claws. He drew a distinction between what he called '*true*,' or spontaneous cheloid, and '*false*,' or cicatricial cheloid; but as recent investigations have proved that no essential difference exists between these two forms of the disease, it will be well in future to drop the terms *true* and *false*, as rather calculated to mislead beginners, and to adopt the more modern terms, spontaneous or idiopathic and scar keloid. Moreover, there is room for doubt whether many of the cases of so-called *spontaneous* keloid have not really originated in small scars, which have been altogether overlooked or forgotten on account of their insignificance.

Keloid is a disease of adult life, and is said to be more common in dark than in fair races. It may originate in scars, however small, such as leech-bites, acne spots, or even from ordinary blisters; but it arises more commonly from larger scars, especially those produced from burns. On the other hand, it also exists as a rare idiopathic disease; its favourite seat is the skin of the trunk, especially near the sternum. The new growth presents the appearance of a well-defined raised tumour, firm, smooth and elastic. It is usually of a mottled or patchy pink and white colour; but its most striking characteristic is the peculiar irregularity of its shape. In typical cases it consists of a central portion, often covered with fibrous cords, from which diverge thick bands and spurs or offshoots, which slope down to the surrounding skin; sometimes the spurs spread out like roots as they join the healthy tissues. Its general appearance reminds one of an hypertrophied scar. The tumour is covered with epidermis, which is usually tense and shiny and free from hair. Its size will of course depend in part on its age; it grows slowly, and in the course of several years may attain the length of three or four inches. Having, however, reached a certain size, its development is generally arrested, and it then remains stationary, but does not disappear. One of the chief characteristics of keloid in both its forms, is the presence of marked spontaneous pain, and also tenderness on pressure, not invariably, but generally present. The distinction, therefore, that Alibert and others make, that *true* is distinguished from *false* keloid by its painfulness, is of no value.

Although the disease is most common over the sternum, it is also met with on the breast and back, and more rarely on the ears and on the dorsum of the hand or foot. Its earliest stage is but rarely seen. Speaking of new patches of keloid which develop in the neighbourhood of old ones, Kaposi remarks: 'They consist, at the commencement, of brownish red streaks of skin with a pale red or whitish lustre, of the size of oats or barleycorns, flat or already slightly elevated, communicating a sense of resistance, and mostly slightly painful on pressure. In the course of many months or years the linear or streaky keloid increases in one or the other direction, or in every superficial dimension, and thus assumes one of the characteristic shapes mentioned above, with or without processes. At the same time it has become somewhat thicker and is more elevated. Occasionally it increases equally in thickness, and it then becomes a tuberous, firm tumour.'

Keloid is, as I have said, occasionally developed from very small scars, as leech-bites or small-pox marks. Erasmus Wilson mentions the case of a gentleman with a keloid tumour on his shoulder, whose daughter's back was covered with small growths of the same kind, developed in the scars left by acne. Hebra also has met with several cases of the disease forming on acne scars in two or more members of the same family, and has further watched its spontaneous involution and complete disappearance in some of these cases. These are almost the only instances in which the new growth has been known to disappear spontaneously; it is also worthy of remark that its removal by knife or caustic is almost invariably followed by a return of the disease.

The erroneous belief that cicatricial keloid is nothing more than an hypertrophied scar, renders it necessary to point out briefly the structural distinction between the two. On making a transverse section of a cicatricial keloid growth, the difference in the arrangement of the fibres of the scar and the new growth can be easily seen, sometimes even with the naked eye; the fully formed keloid consists of dense, white, glistening fibrous-tissue, the fibres of which are closely packed, and are arranged in the direction of the long axis of the tumour, which has a tendency to be spindle-shaped; occasionally bands of fibres are seen running obliquely, but they follow a definite course, and present quite a different appearance from the irregular meshwork of fibres seen in the scar tissue. The keloid grows up in the cicatricial tissue, and pushes the latter aside and before it, so that at a certain stage it can be seen surrounded by scar-tissue; the keloid, however, also invades the healthy corium in the neighbourhood, and in this respect differs altogether from hypertrophied scars. The very small number of vessels met with in perfectly formed keloid is another point in which it contrasts with cicatricial tissue, which is generally well supplied with blood, and though many of the vessels become partially obliterated, they still may be easily traced as dark fibrous cords joining the pervious vessels.

Growing, or peripheral keloid differs a little from that which is perfectly formed. We there find a large number of nucleated, spindle-shaped cells, arranged in layers round the walls of the arteries, and it is believed by Warren and others that these cells are metamorphosed into the fibrous tissue of the keloid, and that the vessels enclosed in them become compressed and obliterated. It is only necessary to state further, that the true and false keloid present precisely the same structure and mode of growth, and to repeat, that the arrangement of their fibres is totally different from the irregular network of scar tissue in which bands cross each other in every possible direction.

Differential diagnosis.—It must be admitted that the general appearance of keloid is that of an hypertrophied scar, and as we cannot often make a microscopical examination of a section, we must depend chiefly on the history and other characters for a differential diagnosis. The following points should therefore be borne in mind: (1) The position of the growth; for example, its situation on the sternum will be evidence in favour of keloid, and this will be increased if the growth be multiple. (2) Keloid is always attended with spontaneous pain, and also tenderness on pressure; this is a point of considerable diagnostic value. (3) An hypertrophied scar does not spread beyond the limits of the structures destroyed, but keloid, on the other hand, invades new and healthy tissue of the corium.

A very remarkable case of keloid in small-pox scars has been lately (1879) brought before the Clinical Society by Dr. Goodhart. In this case the growths were painless, but attended with itching. Many are now undergoing spontaneous involution.

REFERENCE TO PLATES.

Keloid. Fox's Atlas, plate 50.

XANTHOMA.

Syn. *Xanthelasma, Vitiligoidea.*

Definition.—Xanthoma is a connective-tissue new-growth, infiltrated with an oily material, and characterised by the formation of small sharply defined yellow patches covered by the cuticle.

This disease was first very briefly noticed by Rayer, and subsequently fully and accurately described by Addison and Gull under the name of vitiligoidea. To Erasmus Wilson we are indebted for the names xanthoma and xanthelasma, by which it is now known.

It is convenient to consider the disease under two forms: (1) as a local affection commonly found on or near the eyelids, and hence often called *xanthelasma palpebrarum*; (2) a more general form, *multiple xanthoma*, which is especially associated with jaundice, and which appears in various parts of the body. Local xanthelasma is an affection of middle or advanced life, and never occurs in children; it is generally met with in the neighbourhood of the eyelids, and is especially liable to appear on the skin round the inner canthus, so as to involve a small portion of both the upper and lower lid, or as an isolated spot on the upper lid; it is very symmetrical, though its development on one side of the face often precedes that on the other side. It usually takes the form of flat, smooth, slightly raised and sharply defined patches, the colour of which may be either a lemon-yellow, buff or orange. Sometimes the patch is not perceptibly raised, at other times it presents a rounded convex form instead of the more common flat surface, but there is no essential difference in these slight variations. The patches are soft and elastic, so that they can be easily pinched up between the finger and thumb, and are pretty uniform in colour and rather irregular in shape. Rayer compared them, not inaptly, to a piece of chamois leather. They grow slowly until they attain the dimensions of a threepenny-piece or larger, and having reached a certain size they may remain stationary for years, but they never disappear. Their presence is quite unattended with pain or irritation, and is not incompatible with fair general health.

The minute anatomy of xanthoma was first accurately described by Waldeyer and Murchison; it consists of a fibro-cellular growth infiltrated with a yellowish oil, which is found in and around the cells; it is this oily fat which gives to the structure its bright yellow colour, and it is well to remember that it is an essential part of the disease and not the result of degeneration.

Mr. Hutchinson has collected notes of seventy-four cases of *xanthelasma palpebrarum*, the youngest of whom was twenty-eight years of age, and the oldest fifty-nine years when the disease first appeared, the average age being about forty-two years; nearly two-thirds of those affected were women. Mr. Hutchinson remarks: 'The symptom of *jaundice* is noted as having been present in eight cases out of my series (seventy-four cases), and in all of these it had passed off at the time the patient came under my treatment.' He further remarks: 'That any cause capable of producing dark areolæ round the eyes—pregnancy, liver derangement, ovarian disorder or mere nervous fatigue—may predispose to xanthelasma.' It would, I think, be unwise to lay much stress on any one predisposing cause, but probably the most potent will be found to be hereditary tendency; we must rather look for the disease in connection with other symptoms of premature senile change.

Multiple xanthoma, occurring as it does on the skin, mucous membrane and other parts of the body, is a very rare disease, our knowledge of which is chiefly derived from the careful observations made on some four or five cases, and recorded in the 'Transactions' of the Pathological

Society (1873, 1874, 1877). In almost all cases the development of this disease has been preceded by jaundice, the consequence of disease of the liver or of partial obstruction of the bile-duct. There are, however, at least two exceptions to this rule, one in a case recorded by Virchow, and another by Duhring, in a 'stout healthy woman of about thirty-five years of age.' In this variety of the disease the new growth is apt to take the raised and rounded or nodular rather than the laminated form, but there is no essential difference in the nature of the two formations, which indeed often co-exist in the same individual. In most of the cases recorded the xanthoma has been scattered over the body, and has been especially noticed on the skin of the soles and about the flexures of the palms, the only positions indeed in which the disease appears to cause distinct pain and annoyance to the patient; it is also apt to show itself about the joints, especially those of the fingers, elbows and knees, and it has been met with on the mucous membrane of the mouth and on the cornea. Similar changes have been found in some of the arteries, but as these could not be distinguished microscopically from atheroma (which indeed bears a very close relation to xanthoma) it would be unwise to lay much stress upon them.

It would be out of place here to discuss the relation which exists between multiple xanthoma and jaundice, but the following points which more or less bear upon it, are worthy of consideration. (1) The very small number of cases of this disease that have yet been recorded compared with the great number of jaundice cases; (2) that out of that small number at least two have been met with unaccompanied by jaundice, without counting Kaposi's case, where the disease was found at the root of the penis; (3) that in the local form of the same affection, *xanthelasma palpebrarum*, a vast majority of the cases were never affected with jaundice, and, therefore, no one lays much stress on the relationship; (4) that in one case of multiple xanthoma the disease progressed steadily after the jaundice had disappeared.

Considering the small number of cases of the multiple kind from which we have to draw our conclusions, it would be rash in the extreme to state that there is complete proof, 'that it is the circulation of bile-pigment in the blood which produces the cutaneous affection.'

Differential diagnosis.—Several writers have pointed out the similarity that exists between *xanthelasma palpebrarum,* and collections or aggregations of milium granules which are very apt to develop in elderly people in the neighbourhood of the eyelids, and to occupy a position corresponding to that of xanthelasmic patches. The risk of a mistake is further increased by the fact that the two affections often coexist. They may be easily distinguished by making a small incision into the skin, when the milium granule can be easily squeezed out; this is, of course, not the case with xanthelasma. It is well to remember that against a dark jaundiced skin, xanthelasmic patches have a comparatively white appearance.

REFERENCE TO PLATES.

Xanthoma. Fox's Atlas, plate 62; Hutchinson's 'Illustrations of Clinical Surgery' (1877), *Fasciculus* 7 (several good examples).

MOLLUSCUM CONTAGIOSUM.

Syn. *Meliceris.*

This disease was first described by Bateman. It is characterised by the development of small, round, prominent tumours, at first of minute size and translucent appearance, but slowly attaining the dimensions of a pea or even of a hazelnut; those that grow to the latter size are generally pedunculated, but the smaller ones for the most part sessile.

They occur singly or are sparsely and irregularly scattered over the skin of the face and neck, and as the older ones die out, a new crop succeeds them. In the centre of these little wart-like growths there is often a slight depression, so that they are more or less umbilicated, and this depression, when it exists, is believed to correspond to the open mouth of a sebaceous duct. Each tumour has a thick wall, and contains a white, semi-fluid, milky material, which may be easily squeezed out after making a small cut with a lancet. This affection is quite unattended with pain, itching or constitutional disturbance. The following facts are generally accepted with regard to this singular malady:

1. The disease is more common in children than in adults.

2. It is especially liable to occur on the skin of the face, eyelids and neck in children, and on the mammæ in women.

3. It is more frequently met with amongst the poorer than the upper classes.

4. It is contagious.

There can be no doubt that *molluscum contagiosum* is a fairly common affection amongst children in London, but it does not appear to be equally prevalent in the country, or in our northern towns, such as Edinburgh and Glasgow. We may also infer from the way it has been confounded with other and distinct diseases by several Continental writers, that it is not generally very prevalent in many parts of Europe.

Amongst children, the seat of the disease is usually the face and neck, but occasionally also other parts of the body. In women the mammæ are the regions commonly affected. The most interesting point in connection with the disease is the question as to its mode of production and propagation. Much difference of opinion has been expressed with regard to its contagious character, and even at the present time doubts on this point exist in the mind of some observers.

On the whole, there is strong evidence in favour of its being sometimes propagated by contact. This evidence is of two kinds: (1) that of direct experiment by inoculation; (2) that of clinical observation. With regard to the former it may be said that until lately all attempts to propagate the disease by artificial means had failed; but not long ago Dr. Paterson of Leith succeeded in reproducing it by inoculation. The evidence derived from clinical observation is strongly in favour of the contagious character of the disease. Virchow mentions the case of one child being infected by another at the children's clinique of the 'Charité.' Dr. Dyce Duckworth has collected[1] a number of cases which tend to prove the same fact. Hutchinson, Hardy and Paterson have all observed and recorded instances of nurses whose breasts were affected with molluscum caught apparently from infants whose faces were similarly affected. I have myself met with and recorded several cases, the history of which would be very difficult to explain except on the supposition that the disease is contagious.[2] On the other hand, no one doubts that *molluscum contagiosum* often arises apparently in a spontaneous manner. The hypothesis has been made that the contagious properties of this malady depend on the presence of a vegetable parasite; on this point I would only remark, that no proof whatever exists of its truth. The seat of molluscum is generally believed to be the sebaceous glands.[3] If this be true, they at all events become greatly enlarged and altered in structure, and contain a milky semi-fluid material, which examined under the microscope, is seen to be composed of oily matter and oval nucleated cells. On making a section of one of the tumours, it will be found that these cells are congregated with more or less regularity in masses separated by bands of fibrous-tissue running between them and arranged round a central axis, believed by some to be the duct of a sebaceous gland. It is quite evident both from clinical observation and microscopical examination, that molluscum is the result of a distinct well-defined morbid growth, and not a simple abnormal accumulation of sebum in an over-distended gland or follicle, as some writers seem to believe. But it is nevertheless possible that it may be developed from a sebaceous gland.

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[1] See *St. Bartholomew's Hospital Reports*, vol. iv. and vol. viii.

[2] I have recently had under my observation nine children in a school, *coincidently* affected with molluscum contagiosum; I believe this is the largest number yet recorded.

[3] Virchow denies this, and his view is supported by other observers.

Differential diagnosis.—It is not easy to mistake *molluscum contagiosum* for any other disease, but we sometimes meet with small sebaceous tumours, for example, about the scrotum and penis in adults, closely resembling in external appearance *molluscum contagiosum*, but which should be carefully distinguished from the latter, inasmuch as they have no contagious properties whatever. It is hardly necessary to point out that *molluscum contagiosum* must not be confounded with *molluscum fibrosum*, which is a perfectly distinct malady.

Treatment.—The treatment of *molluscum contagiosum* is very simple. The larger growths should be divided with a lancet, and then the contents squeezed out, and a little caustic applied. The smaller ones should be simply touched with nitric acid or the potassa fusa liquid caustic.

REFERENCE TO PLATES.

Molluscum contagiosum. Syd. Soc.'s Atlas, plate 9; Fox's Atlas, plate 64; Wilson's Atlas, plate 38.

CHAPTER VIII.

CLASS VI.—*GENERAL CONSTITUTIONAL DISEASES.*

Dermato-syphilis—Elephantiasis Græcorum—Frambœsia.

DERMATO-SYPHILIS.

IT would be out of place here to discuss the dualistic theory of syphilis; but the modes by which the disease is propagated often have a bearing on the question of diagnosis and cannot be entirely left out of consideration. The following differences between the hard and soft chancre are important in connection with this subject.

1. The hard or indurated chancre is much more liable than the soft chancre to lead to constitutional syphilis, but nevertheless the *soft chancre* sometimes *undoubtedly* produces a similar result. Or, in other words, the soft chancre is *often*, but *not always* simply a local affection.

2. In all cases, a chancre followed by free suppuration in the neighbouring lymphatic glands is less liable to infect the system than one which does not lead to the suppuration of those glands.

3. Syphilis may be propagated by inoculation with the blood, pus or mucus obtained from the *secondary* sores of a syphilitic person.

4. It seems highly probable that in the case of a soft chancre the inflammation is of a more active kind than in hard chancre, and that this acuteness of the process prevents general infection, and ultimately leads to the destruction of the syphilitic poison. On the other hand, the

secretion of the hard chancre finds its way gradually into the blood, and thus produces constitutional syphilis. The same rule probably holds good with some other poisons, as for instance that of a dissecting or post-mortem wound; if there is free and rapid local suppuration there is little danger of the poison affecting the blood.

Symptoms of primary sore.—The *soft* primary sore usually consists of an ulcer with sharply cut, but somewhat thickened edges. These sores are *often multiple* and easily spread by contact, as when a fold of skin brings an ulcer in contact with neighbouring healthy tissue. They are commonly met with on the genitals, and are accompanied by swelling and sometimes suppuration of the lymphatic glands. The discharge from these glands is inoculable, producing an ulcer like the primary one. In inoculating with the secretion from a soft sore, a pustule is formed about the third day, which gradually develops into an ulcer. The *hard* chancre is *almost always single*, but it has been proved that it is possible, though difficult, to inoculate successfully with the secretion of a hard chancre on the *bearer*, so that it need not of necessity be single. The hard chancre rarely produces free suppuration in the neighbouring glands.

Besides the typical hard and soft chancre, we occasionally meet with what are called *mixed chancres*, that is, chancres beginning as soft ones, and subsequently becoming indurated at the base.

Phagedenic sores are characterised by the rapidity with which they spread and destroy the invaded tissues. There is a sharp line of demarcation between the affected and healthy tissue, and the ulceration is attended with much pain. When the disease takes this form, patients bear with advantage enormous doses of opium.

Besides these, we often meet with the *serpiginous ulcer*, which is merely a modification of the simple ulcer, and the *burrowing ulcer*, which extends into the subcutaneous tissues and forms fistulous cavities.

It is believed by some, that syphilis may give rise to an inflammation of the urethra which produces a discharge resembling gonorrhœa, without the existence of a well-defined sore, and that this discharge is generally mistaken for the latter disease. Again, it is by no means impossible that an acute gonorrhœa may mask a small syphilitic sore existing at the same time. These two facts may serve to explain the distinctly syphilitic symptoms that occasionally follow a supposed attack of gonorrhœa.

The *differential diagnosis* between syphilitic eruptions and those simple eruptions which closely resemble them, is of the highest practical importance, because on it depends the success of our treatment. Beginners are as a rule too apt to trust to a history of *primary* syphilis, or its absence, as a chief guide to diagnosis. Now, without undervaluing a history of this kind, it may be safely affirmed that it is, in many instances, a most fallacious guide, and that in private practice, and especially in the case of women, the subject often cannot be investigated at all. We ought, therefore, to be able in all cases to arrive at a correct diagnosis without any inquiry as to the primary disease. It will, however, be pointed out in what class of cases this inquiry is most useful. But while we may easily over-estimate the importance of a direct proof of a primary sore, it would be difficult to value too highly the general history of constitutional syphilis. Familiarity with the appearance of syphilitic eruptions is the only safe guide to diagnosis, but their study may be assisted by the following considerations:—

1. The peculiarity of complexion in a syphilitic patient is remarkable. It is not of course always present, and is much more common in chronic syphilis than in that recently acquired; moreover it is much influenced by the severity of the attack and the constitution of the individual. We must not, for example, expect to meet with it at the beginning of an outbreak of secondary specific roseola; but if

the disease has lasted for some months, we shall almost surely find that it has produced a peculiar change in the complexion which is best described as a *pale* and *dirty opaque* appearance. This change in colour is due to two causes. (1) The paleness is the result of general anæmia from an impoverished condition of blood, which may often be demonstrated by placing a little blood under the microscope, when many pale corpuscles will be seen. (2) The muddy opaque or dirty look is due to an abnormal increase in the pigmentation of the skin. I know of no disease that produces an exactly similar appearance. It is scarcely necessary to add that it is general and quite independent of the 'coppery hue' of syphilitic eruptions.

2. We note that the syphilitic eruptions *develop with remarkable slowness and run a protracted course* as compared with the simple inflammatory diseases of the skin which they closely resemble. They also have an especial tendency to recur. This rule does not apply to syphilitic *ulcers* which, compared with non-syphilitic ones, often run a rapid course, but nevertheless, taking a general view, the rule holds good, and is especially applicable in distinguishing syphilitic eruptions resembling varicella or varioloid from those diseases, and syphilitic rose rashes from urticaria, erythema and measles.

3. The *colour of syphilitic eruptions* is often remarkable and highly characteristic; it is described as coppery or raw-ham-like. This peculiarity of colour varies with the age of the eruption and other attendant circumstances. It is of the first importance to recollect that the typical colour is rarely met with in recent syphilitic-roseola which follows closely on the primary sore; on the contrary, this rose rash is at first quite bright, and of a clear red or pink, and without the slightest trace of anything syphilitic in its appearance; when, however, it has lasted for some time, an irregular increase in the pigment of the skin occurs, and then we have the dirty brown maculæ characteristic of the

disease. In practice we meet with various shades of colour, from the pale dirty brown to the typical copper-coloured blotch, and from this again to the deep purplish brown or almost black pigment stain which is sometimes left after a syphilitic sore has healed. Indeed there is no other disease of the skin which leads to more remarkable changes in the rete Malpighii.

4. Of all the characters which distinguish dermato-syphilis perhaps *polymorphism*, or the appearance of several forms of eruption at the same time is the most important, because in no simple disease is this peculiarity developed to anything like the same extent or with equal frequency. It is in fact the exception to find a syphilitic eruption assuming a uniform appearance in different parts of the body. For example, we may find maculæ in one part and mucous tubercles in another, or ulcers in one part and nodes in another; or we may even find four or five different forms of eruption on one and the same individual. Hence the great importance of examining *every part* of the eruption in doubtful cases. A red patch on the chest may present none of the characters of syphilis, but if we find also a typical ulcer on the arm there will be no difficulty in arriving at a diagnosis.

5. *Locality* as a means of diagnosis, is sometimes of value. Secondary eruptions which follow closely on the primary sore are commonly *symmetrical*; but remote secondary (tertiary) eruptions are, on the contrary, generally *unsymmetrical though frequently both-sided.* The reason of this difference is, that recent secondary eruptions occur while syphilis is still a blood-disease or fever (I use the word for the sake of convenience), while remote secondary eruptions occur after the fever has passed away and when all the tissues of the body have probably undergone some obscure change which is manifested by the development of syphilitic inflammations and growths, more or less local. Tertiary ulcers are remarkable for occurring on any part of the body, and in this respect they contrast with simple

ulcers which have their favourite seat on the legs. Thus an ulcer forming on the forearm or abdomen without any apparent cause would at once arouse our suspicions of a specific origin. Again, chronic sores, fissures, and ulcers about the mouth, especially about the *tongue*, are highly symptomatic of syphilis. Certain forms of alopecia and seborrhœa of the *scalp*, '*psoriasis palmaris*,' especially if unsymmetrical, and changes occurring at the root of the *nails* leaving a ragged border, are all more or less characteristic. Syphilitic maculæ, papules and roseola are most common on the trunk and pemphigus on the soles and palms.

6. There is a tendency in syphilitic eruptions to assume circular, serpiginous and crescentic or horseshoe shapes; this tendency is very marked in specific *ulcers*, but exists also in a less degree in many forms of eruption; taken alone, however, it is not a diagnostic sign of great value, except perhaps in the case of ulcers.

7. *Itching* and subjective sensations are generally less in syphilides than in non-syphilitic eruptions. This rule is undoubtedly a valuable one, and in the main true, though not without exceptions. It is especially applicable in the differential diagnosis of dermato-syphilis which assumes the appearance of eczema. A syphilitic eruption for example, on the scalp may present all the usual appearances of an eczema either dry or moist, but the severe *itching* which is never absent in eczema will be wanting. Again, the irritation of the skin in syphilitic roseola is less than in most of the simple red rashes.

As a rule, the *pain* attending syphilitic eruptions, sores, and ulcers, is less than that of simple skin-diseases. This rule is of course not applicable to periosteal changes or to phagedenic ulcers, but is true of most sores, and may help us to distinguish true lupus, which is always very sensitive, from a similar ulceration of the face of remote syphilitic origin.

8. The *crusts* that form on specific sores are thick, laminated, very adherent and unhealthy-looking. These features are particularly well seen in rupia, which is a typical syphilitic disease.

9. The frequent development of *tubercles* (mucous, connective-tissue, and gummy) on the skin, in conjunction with other changes, is extremely characteristic, because we do not find anything similar in simple skin-affections. *Mucous tubercles* are met with at a very early stage, *connective-tissue tubercles* later, and *gummy* ones the latest of the three. It is true that we occasionally meet with cases of elephantiasis græcorum and scrofulous disease of the skin, in both of which tubercles occur, but these affections are far from common, and present other characters which serve to distinguish them from syphilis. Nevertheless, they are the two chronic diseases most commonly confounded with tertiary syphilis.

10. The occurrence of ulcers of a *round, serpiginous, crescentic or horseshoe form with sharply cut edges and often of a peculiar colour*, sometimes of an ashy-grey, and at other times copper-coloured, is one of the most important signs of syphilis. These ulcers are usually a later stage of tubercles, which undergo degenerative changes and ulceration. The rather rapid formation, the slight pain, and the position of these ulcers, are all points which may aid the differential diagnosis from lupus and epithelioma, which occur more exclusively on the face, and are much slower in their development and growth than syphilitic ulcers.

11. The presence of white flattish scars on different parts of the body is sometimes an aid to diagnosis. It will generally be possible to obtain a history of these scars, and if they have been produced by sores which occurred without any such apparent cause as burns, injuries or bedsores, there will be presumptive evidence of a former attack of syphilis, and this will be all the stronger if they are pretty numerous and found on the trunk, thighs, arms or scalp.

We must be very careful, however, in drawing conclusions with regard to a single scar found on the face or shin.

The foregoing remarks apply more or less to dermato-syphilis generally. It will now be necessary to enumerate in detail the principal forms assumed by syphilitic eruptions, and also to point out briefly the peculiarities that distinguish each variety.

The common *recent* secondary eruptions are the following: (1) Roseola, or rose rash. (2) Maculæ. (3) Papular eruptions (syphilitic lichen, so called). (4) Mucous tubercles and patches. We also meet with alopecia, pustules and ulcers, but these latter are less common on the skin as recent secondary forms, and usually occur only in severe cases. There is no well-defined line of demarcation between the *recent* and the *remote* secondary eruptions, of which latter the following are the most common: (5) Pustules, particularly ecthymatous and acne-form. (6) Seborrhœa and alopecia. (7) Squamous patches. (8) Tubercles. (9) Ulcers. (10) Rupia. (11) Onychia.

Congenital syphilides correspond very closely with secondary eruptions, but coppery blotches and mucous tubercles are the prevailing forms. Bullæ, though rare, are more common in congenital syphilis than in the acquired disease.

1. *Rose rash* or *roseola syphilitica,* when it first appears, may be *very easily* mistaken for other red rashes if we trust alone to its appearance, which is often identical with simple erythema. It is in this form of the disease that the *history of a primary sore* and *other symptoms* are of the greatest value for the purposes of differential diagnosis. Syphilitic roseola always *follows closely* on the primary disease (inoculation), indeed it often develops before that has disappeared. It is frequently accompanied by the characteristic sore-throat and other well-known symptoms, and at the outset of the eruption these general symptoms are our chief means of diagnosis. A little later on when pigmentation occurs,

the diagnosis is easy. Syphilitic roseola may, in the first instance, be readily distinguished from measles and German measles, by the *febrile* and *catarrhal* symptoms of those maladies. Pigmented syphilitic rose-spots become *more defined by exposure to cold*; the reverse is the case with the simple red rashes. Again, the *subjective sensations* are more marked in the latter than in the former.

2. *Syphilitic maculæ* are among the commonest manifestations of the disease. They may be red, livid, copper-coloured, dirty brown, purple or almost black, the tint of colour being produced by the varying combinations of local hyperæmia and abnormal pigmentation. They may occur as recent or remote secondary eruptions; in the former, the hyperæmia usually preponderates over the pigmentation, and therefore the red or bright copper-coloured maculæ are the most common. The yellowish syphilitic pigment spots, especially about the forehead, may be easily mistaken for chloasmata or freckles.

3. *Papular dermato-syphilis* for the most part accompanies or follows quickly on roseola; it is in fact nothing more than a further development of this eruption, in which a local hyperæmia and infiltration occurs about the hair follicles, which leads to the formation of small, well-defined papulæ.

4. *Mucous tubercles* and *patches* are among the most distinctive and characteristic evidences of syphilis; there are indeed no simple tubercles which present the same features. They occur both on the skin and mucous membrane, but especially near the juncture of these structures; as, for example, about the anus, perineum, labia, prepuce and navel. On the skin elsewhere they are usually confined to the flexor aspects of those joints which are kept soft, warm and moist, or where there are folds of skin in contact. These tubercles soon lose their outer epidermic covering, and then secrete a fluid which is highly contagious, so that they are easily multiplied by contact, and also communicated from

person to person. In infants a few mucous tubercles about the anus is often the only sign of congenital syphilis.

5. *Pustular dermato-syphilis* may assume several different forms. It may closely resemble: (1) varioloid; (2) varicella; (3) ecthyma; (4) acne. The two first usually follow quickly on the ordinary secondary symptoms. They may be distinguished by the absence of fever and by the more chronic character and slow development of the pustules. But in spite of these distinctive characters, the resemblance is sometimes so striking as to deceive even the experienced practitioner.

Some years ago, when small-pox was epidemic in London, I admitted into my wards at the Middlesex Hospital, a case of this kind, in which the resemblance to varioloid was so great, that several experienced medical men who saw it with me pronounced it undoubted small-pox. The patient, a young woman, had applied for admission to more than one general hospital, and had been refused on the ground that it was a case of small-pox, and as far as eruption went, the appearance was *identical* with that disease; each pustule was typically umbilicated, they all appeared in the same stage of development, there was no spot of any other kind visible, moreover, the febrile symptoms were more marked than one would have expected in dermato-syphilis. But if we could have trusted the history given by the patient, the duration of the eruption was incompatible with small-pox, it should have been more advanced; but those who believed it to be varioloid thought that she had picked up some information as to the reason of her non-admission at different hospitals; they therefore did not believe her statement as to the date of the first appearance of the eruption. Now I have said that there were no other spots apparent on the body except those resembling small-pox; after, however, a very careful search, I found on one leg a single doubtful little spot, which did not correspond exactly with small-pox. This fact, taken in conjunction with the history given by the patient of the date of the eruption, and her general peculiar 'muddy' complexion, led me to the conclusion that it was a case of dermato-syphilis. Subsequently other symptoms of syphilis developed, and the girl then admitted having lately had a sore.

Pustular syphilides of the face resembling acne are not uncommon. In these cases, for the purposes of differential diagnosis, we note an *absence of comedones* which are never wanting in acne. Moreover, specific pustules are often found amongst the hair of the scalp as well as on the face, which is hardly ever the case in simple acne.

6. *Syphilitic alopecia* is a very common affection. It sometimes occurs during the course of recent secondary symptoms, and may then be simply due to altered nutrition and death of the hair. But it more commonly occurs as a remote secondary affection, generally associated with *seborrhœa.* The head becomes covered with dirty yellow scales, and the hair harsh and brittle, so that it breaks off and also combs out easily. Sometimes alopecia is associated with a distinct active syphilitic inflammation of the scalp resembling eczema, and producing a discharge which forms dirty unhealthy-looking crusts; as these are removed the hairs come out. It may be distinguished from simple eczema by the absence of itching and irritation, by the character of the crusts, the rapid loss of hair, and by the peculiar and very disagreeable smell and the presence of specific symptoms in other parts of the body.

7. *Squamous syphilides* are either diffuse or circumscribed. The former are usually a later stage of some papular, macular or rose rash, and as such are not difficult to recognise; the scales are thin, there is no itching, and the skin is more or less abnormally pigmented, which gives it the peculiar dirty look to which I have so often referred. In short, scaly affections of this kind are little more than a chronic desquamative stage of previous eruptions.

The *circumscribed forms* of scaly dermato-syphilis are more important, and may be easily confounded with *dry eczema* or *psoriasis vulgaris*, particularly the latter, which often leaves behind brown pigment spots. The syphilitic scaly eruptions, however, do not *especially* attack the point of the elbow and the skin below the knee pan, though they may occasionally appear there as elsewhere. The scales are thinner and dirtier than those of psoriasis and more difficult to remove, and the corium does not bleed readily on their removal as is the case in psoriasis; pigmentation is usually well marked and of a typical colour. Itching is rarely present. Moreover the scalp is often affected, and this is invariably attended with *loss of hair*, whereas simple psoriasis, when it attacks the scalp, has but little effect on the hair. Lastly, the *complexion* of those who suffer from the latter disease is clear and fresh, and contrasts remarkably with that of the constitutionally syphilitic patient.

Psoriasis palmaris and *plantaris* as it is miscalled, is always of syphilitic origin, but it differs in appearance and nature from true psoriasis, which moreover, never occurs on the palm. It usually shows itself as a small copper-coloured spot; this gradually becomes scaly with a desquamation of epithelium, leaving a somewhat thickened, raised or dirty ragged edge. The tendency of these patches is to spread at the circumference. Sometimes the cuticle becomes thickened, brittle and fissured. The affection is very chronic and often very inveterate. It may be confounded with dry cracked abortive eczema of the palm, but the appearance is different, the itching and pain is much less, the history of the commencement is also different, and lastly, eczema rarely occurs on the palm without being or having been also present elsewhere.

Syphilitic squamous patches are not uncommon about the perineum, scrotum and penis. They usually present a rounded well-defined border, and from their situation are apt to become red, inflamed and very chronic. They may be easily mistaken for old patches of psoriasis or eczema;

the latter disease, however, especially in this region, is attended with intolerable itching, and although this form of syphilis is also often irritable, yet the itching is far less than in simple eczema. The previous history is here a valuable guide, but it must be admitted that the diagnosis is sometimes difficult.

8. *Syphilitic tubercles.* I have already referred to tubercles, and therefore will only add that the *remote* secondary ones are of two kinds (not mucous tubercles): (1) What I for convenience call *connective tissue tubercles.* (2) *Gummy tubercles.* Connective-tissue tubercles are distinctly of an inflammatory kind, and closely resemble in structure the hard chancre. There is enlargement of the connective-tissue elements, and an infiltration of small cells. These tubercles occur on any part of the body, the backs of the hands and feet excepted. *Gummy tubercles* are more distinctly tertiary[1] formations, and are especially found in the subcutaneous tissue; they are very apt to soften and ulcerate; indeed tubercles of this kind rarely disappear without suppuration or ulceration. Both forms of tubercle are typical of syphilis, as no other *common* disease of the skin produces growths that can be easily mistaken for them.

9. I have already referred to the frequent occurrence of ulcers of certain forms, as especially characteristic of syphilis, and therefore nothing further need be said under this head.

10. *Rupia* is a rare disease and, as I believe, in its typical form, always syphilitic. It consists of peculiar hard, conical, laminated crusts of a limpet-shell shape; when these crusts are removed an ulcer is exposed which has more or less of a specific character.

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[1] I frequently use the terms 'recent secondary' and 'remote secondary,' or 'tertiary,' but I attach no scientific value to these terms, and only use them as convenient in indicating roughly the time that eruptions or growths appear.

11. *Onychia syphilitica* is met with in two varieties: (1) a subacute form, found chiefly in congenital syphilis, which is attended with pain, redness, discharge of pus around the nail, and more or less ulceration of the matrix. This affection never occurs without other symptoms of syphilis being present. (2) The second variety is met with in adults, and often shows itself by the nail first becoming spotted and furrowed; it then gets rotten and brittle, and crumbles away at the root, so as to leave a ragged border attached to the distal portion. The free edge and margins of the nail also suffer and become broken and fissured. The new nails formed often partake of the same characters, and thus the affection is apt to become very chronic and troublesome. Common psoriasis leads to changes in the nails by which they become opaque and brittle, but it does not produce the peculiar crumbling away of the root of the *nail* above described. In psoriasis of the nails there will generally be indications of the disease elsewhere to aid the differential diagnosis.

Treatment.—There is only one satisfactory way of treating constitutional syphilis in infants, and that is by the exhibition of mercury. The most suitable and convenient method for administering it is by inunction. The blue ointment should be rubbed into the soles of the feet or palms of the hands, or it may be applied on a band of flannel stitched round the waist. In this way the movements of the child secure the thorough absorption of the ointment. The advantage of this plan is that it does not upset the digestion, and there is no difficulty in carrying it out. If grey powder be preferred, it should be given in very small doses, often repeated, and when it has any tendency to purge it may be combined with a little pulvis cretæ aromaticus.

Secondary Syphilis.—In dealing with recent secondary syphilitic eruptions the previous history and treatment of the case should, if possible, be taken into consideration.

For example, if the patient has recently suffered from a primary sore, which has healed of itself, he should, *in all cases*, be treated with mercury and ordered mercurial inunction, or mercury may be administered by the mouth, until the constitutional effect of the drug shows itself, or the éruption and other syphilitic symptoms have disappeared. In the treatment of most secondary eruptions, when there is nothing to indicate the necessity of vigorous mercurial remedies, small doses ($\frac{1}{16}$ grain) of perchloride of mercury either with or without iodide of potassium, given in some tonic or aromatic infusion, will be found the most generally useful medicine, or the biniodide may be given in a pill (49). With many individuals it is, however, apt to derange the digestion, in which case the bicyanide of mercury may be substituted, and given in the form of a pill (48) twice or three times a day. The protoiodide of mercury pill (47) is also a useful preparation. It is often a good plan to follow up a course of mercury with a course of iodide of potassium and tonics. It is frequently advisable to give iodide of potassium without mercury: the special indications for the administration of this salt in dermato-syphilis are (1) the coexistence of periostial affections, (2) a low constitutional condition, (3) the coexistence of albuminuria, in which latter case mercury is generally contra-indicated. The most important point in connection with the use of iodide of potassium is the fact that it soon loses its effect unless the dose be from time to time steadily increased. This should be done about once a week, otherwise the result of the treatment will be often disappointing. In those cases in which the constitutional condition is low, iodide of potassium should be given in combination with carbonate of ammonia and cinchona, and the dose gradually increased from five grains up to half a drachm (or more if required) three times a day. Under these circumstances, if there is no indication to the contrary, a dose of opium every night is of the greatest possible value. When there is much anæmia or albuminuria, the iodide of potassium should be combined with iron, or with the citrate of iron and quinine. The great use of opium in the treatment of all severe syphilitic sores is too much forgotten. I have seen many cases in which iodide of potassium and mercury failed altogether to produce the desired effect, but which immediately improved as soon as a few grains of opium were given daily, in addition to the iodide of potassium treatment. The special indications for the use of opium are the presence of large or numerous ulcers, great depression, pain, or sleeplessness, and any other symptoms which show that the system is profoundly affected. On the whole, my experience leads me to the conclusion that the value of iodide of potassium as compared with mercury is rather over-estimated by the profession, and that opium in severe cases is too much neglected. In some obstinate cases of syphilitic eruptions, especially when associated with ulcers of the tongue, iodoform in one grain doses, given in a pill with extract of gentian three times a day, is a valuable remedy.

Mercurial vapour baths are often of great value in the treatment of the severer forms of syphilitic eruptions. They are especially useful when the internal administration of drugs has failed, or when a rapid effect is desired. It is advisable that the patient who is undergoing a course of vapour baths be confined to the house. The bath should usually be taken two or three times a week, and a few baths will often produce a decided effect. The apparatus may be obtained from any surgical instrument maker. In the administration of the bath heat is applied simultaneously to calomel and a little tray of water, so that the volatilised drug and steam are together brought into contact with the patient's skin. The quantity of calomel required for one bath is from fifteen to thirty grains, and about a quarter of an hour is long enough for its application.

Local treatment.—In the remote secondary and tertiary forms of syphilitic eruption, which are generally more or less localised, local treatment is especially indicated. Ulcers should be dressed with black wash or with diluted unguentum hydrargyri. Iodide of starch (28) made into a paste is also useful when stronger applications cannot be borne. By far the best remedy for *indolent* ulcers is iodoform; the ulcer should be first thoroughly washed and dried, then the iodoform dissolved in ether (ʒj ad ℥j) should be lightly painted on once a day. This dries quickly, and then the ulcer should be covered with a piece of dry lint. Iodoform may be used as a powder, if desired; when thus used it should be diluted with tannin or finely powdered cinchona bark (53) in any proportion required. This should be dusted on the ulcer, and then the whole covered with a piece of lint. Iodoform may also be applied as an ointment. Five to twenty grains should be dissolved in a little ether, and then combined with an ounce of lard or vaseline. The chief objection to iodoform is its very disagreeable smell.

Localised patches of syphilitic papules, tubercles, and serpiginous eruptions should be covered with a mercurial plaister, or dressed with mercurial ointment and covered with a piece of lint and strapping. Syphilitic maculæ and scaly eruptions, covering a considerable extent of surface, are best treated with a lotion containing iodide of potassium and perchloride of mercury. This should be applied two or three times a day, and allowed to dry on. Syphilitic palmar psoriasis is well treated in this way when it is inconvenient to apply mercurial ointments. Syphilitic sores and fissures about the mucous membrane of the tongue and mouth should be painted with a solution of nitrate of silver or of bicyanide of mercury (gr. 15 ad ℥j), constitutional treatment being, of course, at the same time adopted.

REFERENCE TO PLATES.

Syd. Soc. Atlas, plates 17, 28, 31, 37, and 40; Cazenave's Atlas, plates 23–27.

ELEPHANTIASIS GRÆCORUM.

Syn. *Leprosy, Leontiasis, Lepra Arabum.*

Definition.—*Elephantiasis Græcorum* is a chronic constitutional disease characterised by structural changes in the skin, mucous membrane and nerves, and producing great disfigurement of the features and deformity of the extremities.

This disease is very widely distributed and found in every quarter of the globe, but is far more common in tropical than in temperate climates. It was very prevalent in Europe during the Middle Ages, but since that time it has almost died out, and is now only found in circumscribed districts, of which the most extensive is the west coast of Norway. For many years it was doubted whether the disease met with in Europe was identical with that seen in tropical countries, but this point has been finally settled in the affirmative. Since the publication of my Goulstonian lectures on this subject in 1873, I have had under my care cases of leprosy from many different parts of the world, including India, Burmah, Mauritius, Africa, West Indies, Brazil, North America, the Sandwich Islands, and Europe, but in all these cases the disease has presented exactly the same characteristic features.

It has been ascertained beyond all doubt that the disease is hereditary, and this is probably the chief cause of its continuing to exist in such countries as Norway and Iceland, where intermarriages amongst the afflicted families are common. Certain conditions of climate, soil and food appear also to have some influence on its development. The question of contagion is still *sub judice*; one thing is certain, that it is not contagious under ordinary circumstances; on the other hand, it has within the last thirty years been imported and spread rapidly amongst the natives of certain islands (the Sandwich Islands), where it was before quite unknown. It is probable that in a *certain stage* of the disease it is inoculable; this appears to me the most reasonable explanation of its progress amongst a new population.

It is usual to describe three varieties of this disease:—

I. Tuberculated leprosy. II. Anæsthetic or mutilating leprosy. III. Macular leprosy. It must, however, be remembered that these three forms all belong essentially to the same disease, and differ chiefly in minor points and in respect of the tissues especially involved.

The early general symptoms belong for the most part to all three varieties, but they vary much in severity in different cases, and are most marked in the tuberculated malady. The invasion of the disease is usually slow and insidious; often years elapse before any very characteristic symptoms appear. In exceptional cases, however, the onset of the disease is acute, and the symptoms develop with great rapidity. I have seen one example of this kind in an Englishwoman, who, after some years' residence in Burmah, left it with no sign of leprosy, but in whom the disease developed and ran a very rapid course after her return to England.

The early symptoms of the malady consist of general constitutional disturbance, debility, mental depression, loss of appetite, chilliness, and slight recurrent febrile attacks. All these symptoms may subside for a time, but sooner or later they return. The development of isolated or scattered blebs, resembling those of pemphigus, is sometimes met with as an early symptom, especially in the anæsthetic variety. I have also seen them appear when the disease has been fully established, and therefore no great stress must be laid on their simply *premonitory* character.

I. Tuberculated leprosy, which is the most severe form of the disease, begins with the usual constitutional symptoms; after these have lasted, with intermission, for months or years, the first distinctive changes in the skin appear;

these consist of spots, which develop during one of the febrile attacks; they are of a dull red or reddish brown colour, tender to the touch, often slightly swollen, and vary in size from half-a-crown to the palm of the hand or larger; they partly disappear under pressure, showing their hyperæmic character. These spots are always bilateral, and are most frequently seen on the extensor surface of the extremities, but sometimes on the face and trunk. After a short time their hyperæmic character disappears, leaving a patch of skin discoloured and perhaps a little thickened; sometimes portions of these patches are paler than the normal skin, but in Europeans they are, for the most part, much darker and of a brown colour. Some of the spots, after a time, entirely disappear, while others lead to more or less permanent changes in the skin.

Amongst dark races the sufferer may, in consequence of pigmentary changes, more especially in the macular variety, acquire a somewhat piebald appearance, which has led to the disease being confounded with a distinct leucodermic affection, called in the East white leprosy, but which has no real relation to elephantiasis. Associated with these changes in the skin we often find the superficial nerves affected, so that patches of partially anæsthetic skin are produced; these are, for the most part, only temporary, the skin sooner or later resuming its normal sensibility. The above-mentioned symptoms may reappear, and then subside over and over again, without much permanent alteration in the skin except discolouration. But in most cases we notice ere long a slight but peculiar change in the face, which is not easily mistaken; the skin of the cheeks, a little below the eyes, looks rather swollen and puckered, the nose appears somewhat thickened, the patient at the same time complaining of not being able to breathe quite freely through it, and the tone of voice is a little altered in consequence; he speaks, as we commonly say, 'through the nose.' As a further and later change, very characteristic tubercles develop in the skin, especially on the face and hands; these swellings are tender on pressure, and they produce much thickening of the tissues, and consequent alteration in the features. The skin of the forehead becomes thickened and tuberculated, its furrows deepened, and its prominences exaggerated; this is especially the case on and over the eyebrows, and gives a peculiar heavy, morose expression to the countenance; the hair of the eyebrows is quickly lost, the nose becomes tumid with nodules and tubercles; the cheeks are irregularly thickened, the lips hard, swollen, and sometimes everted; the chin is nodulated, and the ears, greatly enlarged, stand out stiffly from the side of the head. The whole appearance is hideous and revolting. One peculiar effect of these changes is to make young people look middle-aged.

Coincidently with these changes in the face the dorsal aspect of the hands and feet may be similarly affected; the skin becomes brown, and the fingers, greatly enlarged, stand stiffly apart; the nails become dull, dry, and fissured; some of the tubercles shrink and are absorbed, while others ulcerate and leave open sores very difficult to heal. Sooner or later the mucous membrane of the mouth, tongue, and larynx becomes altered and thickened, and the voice assumes a peculiar hoarse whisper, which is very characteristic of the disease. The eyes also suffer; the cornea becomes opaque, and a partial or complete loss of sight is the consequence. Coincidently with these visible changes in the skin and mucous membrane we find alterations occurring in the nerves, and leading to the formation of patches of completely anæsthetic skin; they vary much in size, and are met with chiefly on the forearms, hands and feet, rarely on the trunk. In fact, in ordinary cases, the new growth and structural changes of all kinds are confined to the face, ears, hands, feet, forearms and legs, and the mucous membrane of the mouth and throat. The ulnar nerve is particularly liable to be affected, and a nodular swelling may be easily felt just above the point where it crosses the elbow joint. Gradually all these symptoms increase, the constitution becomes greatly enfeebled, the temperature is commonly below normal, and the vital powers exhausted; sooner or later some internal complication arises, and the miserable sufferer is carried off by disease of the lungs or kidneys.

II. Anæsthetic leprosy often begins with milder constitutional symptoms than we find in the tuberculated form, and it also differs from the latter disease in that the anæsthetic symptoms are more early and prominently developed, but chiefly in the fact that the disease is particularly liable to produce a mutilation of the fingers and toes. The distal phalanges are especially apt to be affected and the bones destroyed, so that we sometimes see the nail transferred from the distal to the second or proximal phalanx, the intervening bones being lost. In other cases great atrophy and stiffening of the fingers occurs, so that they assume the appearance of shrunken immovable claws. Sometimes the parts fall off without giving any pain; for example, one of my patients in the Middlesex Hospital characteristically described one of his fingers coming off in a poultice without his feeling it. In other respects this disease runs much the same course as tuberculated leprosy, but is somewhat more protracted.

III. Macular leprosy is the mildest form of the disease; that is, the affection is more distinctly localised to certain parts of the skin, and does not produce such grave structural changes as we meet with in the other two forms; but it not unfrequently happens that macular leprosy, after having existed as such for some years, passes into one of the other more serious varieties, runs the usual course, and ends fatally.

Differential diagnosis.—Fully developed *elephantiasis græcorum* is attended with such characteristic symptoms that it cannot possibly be mistaken for any other disease. This is not, however, the case in an early stage, when the symptoms are but slightly marked. An early development of bullæ may, for example, be mistaken for pemphigus; but it should be remembered that in leprosy the bullæ are isolated or few in number, and are associated with anæsthetic symptoms. Leprosy is more often confounded with syphilis than with any other disease, and it must be admitted that there are points of resemblance between the two diseases. But in the macular stage of leprosy, which is the one mistaken for syphilis, the spots are usually much larger and associated with more pain, tenderness, and swelling of the skin than we find in any form of syphilitic roseola; the pigmentations too are peculiar. The early change that occurs in the face, which I have pointed out, ought not to be mistaken for syphilis.

Illustrative Case.

The following short account of a well-marked instance of true tuberculated leprosy occurring in a native of Guernsey who had *never left* the island prior to its development, is interesting on account of the great rarity of the disease except in those who have resided in countries where it prevails.

J. L., aged twenty, was admitted into Middlesex Hospital, July 12, 1877, and placed under my observation by my colleague, Mr. G. Lawson. His father, a native of Birmingham, was a soldier who had served in India, and died aged about fifty-five. His mother was a native of Ireland, and 'died of old age.' He had several brothers and sisters older than himself, and all healthy. With regard to food, he tells us that he has always had plenty of meat and vegetables, and has not been at any time restricted to a fish diet. The disease began to show itself five years ago, with feverish attacks, swelling of the face, and discoloration of the skin, with other symptoms of leprosy. The disease made rather rapid progress, and a year after its commencement he was advised to try the effects of a sea voyage, with a view to the improvement of his health. He therefore made short voyages as a sailor to different parts of the English coast, and one voyage to New York; this mode of life does not, however, appear to have had any effect in checking the progress of the malady. At the present time the disease is fully developed, and he has the very characteristic leonine appearance produced by tuberculated leprosy, together with loss of eyebrows, a hoarse and husky voice, enlarged ears and nose, darkened skin, and although only twenty has the appearance of a middle-aged man; he complains of a feeling of numbness about the little and ring finger and also on the inner sides and back of both hands, and there is some loss of sensation in the skin of those parts; brown patches of skin are seen about the elbows and knees; there is a well-marked hard swelling of the left ulnar nerve just above the elbow joint, and a corresponding enlargement less developed on the right side. In short, he presents altogether a typical example of *elephantiasis græcorum* of the tuberculated variety.

The interesting question is, is this a case of true leprosy originating *spontaneously* in Guernsey without assignable cause? I think not. I believe it to be really an hereditary case of the disease. The following facts are of importance: (1) that his father, when in India, cohabited with a coloured woman; and (2) that he died in Guernsey, and that in his last illness he had sores on his fingers and toes, an enlargement of the nose, and discolouration of the skin on the face. In short, it seems highly probable that his father contracted leprosy in India, and ultimately died of that disease. It is worth while to remark that if we had depended on the statements of our patient with regard to his father's death, we should have entirely lost sight of the true origin of the disease. I cannot help thinking that some other cases of this disease, which have been supposed to have originated spontaneously in this country, may possibly have been due to untraceable hereditary taint.

Treatment.—From the comparative rarity of true leprosy in this country it is very difficult to obtain a sufficient number of cases on which to base our conclusions as to the effect of treatment; and therefore the positive results of any experiments in the use of drugs must be received with caution. There is another fact which must be also taken into consideration, namely, that leprosy is liable—at least in healthy climates—to long periods of comparative rest or subsidence, quite apart from any special treatment. It is, in short, one of the features of the disease that it does not progress uniformly. Sometimes it appears for a time to be cured, and then breaks out again without any apparent cause. It is very necessary to bear these facts in mind, because those who are unacquainted with the peculiarities of the disease are apt to attribute to remedies what really is the natural course of the malady under the influence of a mild and healthy climate.

Since the publication of my Goulstonian Lectures on this disease in 1873, I have had over twenty cases of true leprosy under my care, and I have fairly tried the Gurjun and Chaulmoogra oils. I have given a long and continuous trial to Chaulmoogra oil in six cases of this disease, and with apparent benefit in all, and very great benefit in one very severe case, in which the eyebrows and eyelashes have grown again after many years' disappearance. The patients themselves have been strongly impressed with the belief that they had decidedly improved under its internal use as a medicine. On the other hand, not one case has been cured, though in several instances the oil has been taken continuously in full doses for more than a year, and in one instance for more than two years. I would add that all the cases of leprosy on which I tried the effect of the oil were severe cases of several years' standing.

Reference to Plates.

Syd. Soc.'s Atlas, plate 29; Fox's Atlas, plates 67 and 68; Cazenave's Atlas, plates 38–40.

FRAMBŒSIA.

Syn. *Yaws, Pian, Endemic Verrugas.*

As the name frambœsia has been applied by authors to several different diseases, it is necessary to offer a word of explanation respecting it. Hebra and some other writers have used it for a certain class of fungoid, wart-like growths, such as sometimes occur in sycosis or on chronic scrofulous and syphilitic sores, and therefore of course they do not recognise it as applied to any disease *sui generis.* Virchow acknowledges a general disease, but appears to regard it as an endemic form of syphilis. Kaposi gives an historical account of the use of the word frambœsia, but seems to think the disease so called and met with in tropical countries is a form of syphilis; and he further suggests, that the word should in future be excluded from the terminology of skin diseases, and the name papilloma be substituted for Hebra's frambœsia. As the yaws of hot climates is not a European disease, it is not surprising that men like Hebra and Kaposi should be practically ignorant of its nature; they can only judge of it by the writings of others, and it must be admitted that these have often been very obscure. From our constant intercourse with tropical countries, we occasionally meet with yaws in England, but it is very rare, and seen only in imported cases, of which one has come under my own care, and to which I shall refer.

Definition.—Frambœsia is a disease of tropical and subtropical countries; it is not infectious but highly inoculable. It is attended with constitutional disturbance, and a *peculiar form of eruption* on the skin. This disease is more or less common in the West Indies, South America and West Africa, from which latter country it is believed to have been exported to America. For our reliable information as to its nature, we are chiefly indebted to the recent observations of a few medical men in the West Indies, especially Drs. Bowerbank and Imray, and also to Dr. G. Milroy. It appears that the disease has from time to time almost died out in some of the West Indian Islands, but has returned again under circumstances favourable to its development. In Jamaica scattered cases are always to be met with, while in Dominica it is quite common. In one hospital in that island Dr. Milroy found 59 patients suffering from the disease, of whom 33 were males and 26 females; 11 were under 10 years of age and 3 infants. At another hospital he found 182 patients; of these, 80 were males and 102 females; 60 were under 10 years of age, and 61 between the ages of 10 and 20. From this account we may infer that the disease is met with at all ages, but especially amongst the young, and is equally common in males and females.

All observers appear to agree that the malady is very easily propagated by inoculation, and that there is an incubative stage of some four or five weeks after which the disease begins with a feverish attack accompanied by pains in the limbs. Dr. Bowerbank says: 'I believe yaws to be a distinct and specific disease, *sui generis*, in no way allied to syphilis, leprosy, scrofula or any other cachectic disease.' A similar opinion is expressed by other thoroughly competent medical men who have had opportunities of observing the disease for many years. The malady appears to run a certain course in spite of all treatment, and lasts, on an average, about thirteen months. One attack is believed to afford decided protection against a second inoculation, but the affection is very liable to relapse.

The first noticeable change (not always present) in the skin, is a mottling or discoloration, together with a branny desquamation, so that the skin looks as if powdered with flour; this is succeeded by the eruption proper, in the form of minute flat spots of a brownish red colour; from these, little pimple-like bodies of about the size of small shot develop; they quickly enlarge into raised flat-topped tubercles of rounded form, and varying in size from a split pea to a filbert or larger. These little growths are covered with cuticle, and at first seem solid, but subsequently contain a serous fluid often mixed with blood; they have a tendency to form scabs, which, when removed, expose a sore or ulcerated surface. From some of these ulcerated surfaces, a red fungus-like excrescence develops, which is regarded as the characteristic feature of the disease. The eruption of small tubercles is generally pretty copious, and occurs on all parts of the body, especially on the extremities; most of these dry up and fade away with a desquamation of cuticle, while only a few develop the raspberry-like excrescence, which lasts for a period varying from a few months to two years; it does not slough, but gradually shrinks and disappears 'without any scar remaining.' The constitutional symptoms vary very much in severity, and it must be admitted that in chronic cases they bear a close resemblance to those due to syphilis.

Some of the points in which this disease appears to differ from syphilis are the following: (1) It is very common in children (not as a congenital disease), and is more easily communicated from one to another than any form of constitutional syphilis with which we are acquainted. (2) Though it is believed that some benefit is derived from treatment by mercury and iodide of potash, yet the amount of good seems very doubtful, and Dr. Bowerbank says, the disease runs a pretty definite course in spite of all remedies. At all events, the malady is nothing like so amenable to treatment as syphilis. It must also be remembered that the latter occurs in all its usual forms in the countries in which yaws is common, and is just as easily treated as in Europe. (3) The efflorescence is unlike any syphilitic eruption with which we are acquainted.

The following case of yaws came under my care about two years ago. A. L. C., a lad of about thirteen, was born and resided in the island of Palma, one of the Canaries.

He was believed to have caught the disease from a servant. When I saw him the eruption was chiefly present on the face, arms and legs, and consisted of small semi-transparent raised swellings of very peculiar appearance; most of them were smooth and solid; they varied in size from a pin's head to a split pea or a little larger. Some few had ulcerated and left superficial scars on the skin. The eruption had a very close resemblance to Plate 41 of Frambœsia, in the New Syd. Soc.'s Atlas, so much so that when I showed the plate to my patient and his father, they at once recognised the eruption as the same. My patient evidently suffered from constitutional disturbance, with feelings of depression and chilliness, and loss of appetite; he also suffered from a sort of chronic nasal catarrh, which made breathing through the nose difficult, and somewhat altered the natural tone of his voice. After being a short time under my care he returned to Palma; I therefore did not see the termination of the malady.

REFERENCE TO PLATE.

Syd. Soc.'s Atlas, plate 41.

BUTTON SCURVY.

Syn. *Ecphyma globulus.*

Several careful observers believe ecphyma globulus to be a disease *sui generis*, and not a form of syphilis which it somewhat resembles. The disease is said to be confined to Ireland, and even there it is now of rare occurrence.

The eruption consists of fungoid excrescences from the true skin, firm to the touch, and of rounded form; they vary in size from a split pea to a walnut. These fungoid tubercles are considerably raised above the surface of the skin, they sometimes weep and become covered with incrustations, and when these are removed, the exposed surface very much resembles that of a raspberry or strawberry owing to the small granulations visible upon it, which are so characteristic that people describe it as being 'seedy.' Each excrescence is surrounded by a narrow purple areola. There can, I think, be no doubt that this is a form of '*Hebra's frambœsia*,' and not necessarily of syphilitic origin. Kaposi remarks: 'It could not escape the attention of physicians that, occasionally, excrescences resembling those of frambœsia (raspberry or strawberry-like, weeping, ulcerating, red, papillary, and having fungoid granulations on the surface) are seen on the skin, and may persist for months and years, under circumstances which contra-indicate the diagnosis of syphilis.'

CLASS VII.—*NEUROSES.*

Pruritus, neuralgia, hyperæsthesia and anæsthesia of the skin are usually classed under the head Neuroses. It would not be difficult to extend the list to a considerable number of affections which are generally placed under other heads, but in which the nerve disturbance plays such a prominent part as to justify us in regarding them as Neuroses; *Herpes zoster* and *Hydroa gestationis* (bullous hydroa) are cases in point, but the practical inconvenience of separating these diseases from others having similar eruptions and in other respects allied to them is evident. Moreover, the nerve disturbance is after all only a part of a series of changes that occur in the tissues, and does not constitute a convenient bond of union; indeed, in a large proportion of skin affections the nerves are involved; this is shown in various subjective sensations, such as, pruritus, a feeling of burning and stinging, and in many others commonly met with. It is not, therefore, easy to see where a classification of this kind would rightly end.

It will be convenient to refer here, very briefly, to a form of neurosis of a reflex kind, namely, a tendency to a kind of exaggerated blushing or intense flushing of the skin, especially of the face and hands; this exists in some people to such a degree as to constitute a veritable disease. Many persons suffer from it to a slight extent, but in the cases to which I refer, the irritability of the nervous system is so great that the most trifling exciting causes bring about a sudden and violent congestion, accompanied by severe sensations of burning. Sometimes it is excited by slight mental emotion, at other times by the introduction of food into the stomach, or perhaps by a cold wind or the simple application of cold water to the skin of the face. This affection is more common in women than in men, and yet the two worst cases I have ever met with have been in men. The disease is for the most part very intractable, and but little influenced either by external or internal treatment.

The 'Neurotic Excoriations' of Erasmus Wilson require a passing notice. The affection is chiefly met with in young nervous women, and has often been mistaken for an eruption artificially produced. The patient generally feels an itching or stinging sensation in some part of the skin, and is induced to rub the spot; 'the effect of a very slight rub is to detach the cuticle, which seems to slide off the spot, and thus bring into view an excoriated patch.' I believe this obstinate malady is closely allied to Bullous Hydroa; in fact we now and then meet with a perfect blister instead of an excoriated patch.

PRURITUS (*see* PRURIGO).

CHAPTER IX.

CLASS VIII.—*PARASITIC DISEASES.*

I. ANIMAL PARASITES.

Scabies—Filaria Medinensis—Phthiriasis.

SCABIES.

Definition.—Scabies is an artificial inflammation of the skin, produced by the presence of the *sarcoptes hominis.* The diagnosis of scabies is not usually difficult, and yet mistakes are often made. Many a medical man who would readily and correctly diagnose the disease in a pauper or hospital patient will hesitate to give a positive opinion when consulted by a patient belonging to the upper classes, though suffering from exactly the same symptoms.

The following are the chief diagnostic signs of scabies:

(1) The eruption is a form of artificial eczema, and is attended with itching, which is always aggravated when the sufferer gets warm in bed. This itching is unattended with the pain and sensations of *burning* that are often present in simple eczema. The papules of scabies are more isolated and scattered than those of simple eczema, and they do not, in the early stage of the disease, lead to large excoriated surfaces. On the other hand, discrete pustules are more common in scabies than in eczema, especially in children.

(2) Certain parts of the body are particularly liable to be affected. In *adults* the soft skin *between the fingers* and the flexor aspect of the *wrist* is almost always attacked,

the only exception to this rule, and it is an important one, being met with in those who are constantly handling materials which interfere with the comfort of the acarus. I have seen several cases of scabies of which an erroneous diagnosis was made, in consequence of the hands and wrists being perfectly free from the disease; the cause of this exceptional circumstance I was able to trace to the habitual use by the patients of particular kinds of soap. The penis, mammæ, buttocks, lower part of the abdomen, and inner ankles just above the malleolus are favourite seats of scabies; they are also typical spots, for these regions are not especially liable to be attacked by simple eczema; the penis, above all, is a very characteristic situation. Scabies is common on the soft skin at the bends of the elbows and at the axillæ, but so also is simple eczema; therefore locality is here of no special value for the purposes of differential diagnosis. In young children, the *buttocks and the feet* are especially apt to be affected, and in infants at the breast, any part of the body.

(3) In adults, scabies is never found on the scalp and face, and in infants, only occasionally. In adults, the harsh outer skin of the limbs and back is only attacked in cases of long standing, but simple secondary eczema may be developed in any part of the body.

(4) Skin which is covered and pressed upon by garters, bands, belts, or trusses is especially apt to be affected; this is not the case with simple eczema, unless the bands or trusses fit badly, when the skin may become chafed by rubbing.

(5) One of the most distinctive features of scabies is the cuniculus or furrow. These furrows are best examined on the penis, hands, and wrist. When quite new they are not very easily seen, but the epidermis soon gets partially worn off, and the furrow then becomes darkened, and is recognised without difficulty. At this stage it presents very much the appearance of an old pin scratch about the eighth

of an inch long, but, examined closely with a common magnifying glass, it has a somewhat dotted and beaded appearance, with ragged, dirty edges at its commencement, where the roof of the cuniculus has been worn away by rubbing. When there is much pustular eruption and crusts have formed, the furrows may be entirely obscured. In infants they are never found easily.

(6) A history of contagion is of the first importance. If several people in the same family are suffering from an itching eruption about the hands and wrists, the fact will at once suggest a careful examination for scabies. When an infant suffers from scabies the *mother or nurse is always affected*. This point is of practical importance, because the disease is more difficult to diagnose in infants than in adults.

(7) Besides the history of contagion, the history of the gradual and steady progress of the disease from one part of the body to another is important.

(8) The female acarus may often be seen with a common magnifying glass as a very minute white body under the skin of the wrist or penis, and can there be extracted by touching it with the point of a needle or pin, to which it will adhere firmly, and may thus be withdrawn and examined under the microscope. This is, of course, the most satisfactory proof of the nature of the disease, but not always applicable.

The acarus, seen under the microscope, resembles a tortoise in shape; when fully developed it has eight legs, and its under surface is provided with scattered hairs and short spines, which are for the most part directed backwards. The female is larger than the male, and is provided with terminal suckers on the four anterior legs, while hairs occupy a similar position on the posterior ones. In the male, however, the two posterior hind legs have suckers like those on the fore limbs. The young acarus has only six legs, the two extreme posterior legs, which are distinctive of the sex, being wanting; it acquires them after shedding its first skin. The male lives on the surface of the body, while the female burrows under the cuticle, and deposits from ten to fifteen or more eggs in the cuniculus; these eggs hatch in about a fortnight. The young acari escape from the burrow, but the parent does not leave it, and dies when she has finished laying eggs.

The above-mentioned characteristics will serve to distinguish between eczema or simple pruritus without eruption, and scabies. The other diseases with which scabies may be confounded are prurigo and phthiriasis, but the latter affection, as it depends on *pediculi corporis, never attacks the hands,* and is especially common on the back and outer surface of the thighs, parts which are not readily attacked by acari. Again, the itching of prurigo is far greater than that of scabies, and the history of the case will often be a sufficient guide to a correct diagnosis. Crab lice are confined to the hair and skin of the pubes, and are also occasionally met with on those of the axillæ and eyelashes, but, if scabies attacks the pubes, it is *certainly* found also on the penis and lower part of the abdomen.

It should always be remembered that in children especially scabies gives rise to a great variety of eruptions. In them we sometimes see a number of large isolated vesicles or small blebs produced; at other times deep-seated pustules are formed. Not unfrequently the irritation of the disease sets up urticaria, which, when present on the face, may lead to an erroneous diagnosis. Lichen urticatus has a close resemblance to scabies, and is now and then mistaken for it, but the history of this malady is so very different from scabies that there ought to be little difficulty in distinguishing the one from the other.

Treatment.—With regard to the treatment of scabies, a very common error occurs in the following way. A patient suffering from an eruption consults a medical man who believes it to be the itch, and orders accordingly the sulphur ointment of the Pharmacopœia to be well rubbed in; the patient, wishing to get rid of his trouble as fast as possible, carries out the treatment very vigorously; he is probably much better after the first and second application, but he soon begins to get, as he thinks, worse; the eruption extends and becomes more copious, and the more he applies the ointment the more he suffers; after a time he returns to the medical man, who finds him covered with an irritable eczematous eruption, and as he now fails to find anything distinctive of itch, he is apt to think that he has made a mistake. But the fact is, he has probably made no mistake, except that of prescribing a very strong ointment, which his patient has used too freely, and thus, while he has cured the scabies, he has produced a great amount of artificial eczema by the process of cure. Of all remedies, not one is so effective as sulphur ointment properly applied. An ointment half the strength of that of the British Pharmacopœia is quite strong enough, and the best time to use it is at night, when it should be rubbed all over the body, except the head, but especially on the hands, buttocks, and lower part of the abdomen, and then the underclothing used during the previous day, namely socks, gloves, drawers and jersey, should be worn during the night; this thoroughly disinfects the clothes and at the same time keeps the ointment well applied to the skin. In the morning, a warm bath may be taken, and no treatment followed during the day, but of course, if no bath be taken, the treatment will be more effective. For three nights the process should be repeated, but never longer; subsequently a little ointment should be well rubbed on the hands, wrists, and buttocks for a few nights. All treatment should then be discontinued for at least a week, when if necessary it may be repeated for one or two nights, or a milder ointment used. It is sometimes difficult to say whether a case of scabies is cured or not; under these circumstances it is very convenient to use an ointment which does not irritate or annoy the patient by its disagreeable smell and which at the same time will complete the cure. A most excellent ointment of this kind is made with balsam of Peru (ʒij ad ℥j). The styrax ointment is thoroughly effective, but less agreeable.

With regard to sulphur baths I would say that they are not nearly as effective as sulphur ointments. I lately ordered sulphur baths (as being more agreeable than ointment) for a pupil of my own who was suffering from scabies; he took six or seven, and then came to me much better, but not cured; I advised more baths, but did not see him again. He had in all about fifteen baths, and then went home to the country, thinking himself cured; unfortunately he was not cured, and he conveyed scabies to his family. This is not the first time that I have found sulphur baths fail. They are, however, useful under certain circumstances. It may, for example, be very inconvenient to apply sulphur ointment at night; again, in cases where there is much secondary eczema set up with extensive excoriations, the application of sulphur ointment is very irritating. Under these circumstances it is very useful to begin with a few baths, which generally produce an excellent effect; this may be followed up by the application of ointment to those regions known to be specially affected.

Lastly, with regard to disinfecting outer clothes and bedding, it can easily be done by sulphur fumigation or baking. In all cases of long standing the clothes and blankets, &c., should be disinfected, but it is never necessary to extend this to the bed itself.

Reference to Plates.

Syd. Soc. Atlas, plate 27; Fox's Atlas, plate 53; Hebra's Atlas, Heft. 5; Cazenave's Atlas, plate 57.

ACARUS FOLLICULORUM.

The *Acarus folliculorum* or *Demodex folliculorum* is a small parasite that is found in the hair follicles and sebaceous glands. It is met with especially in the skin of the face and about the ears. It is of no pathological importance, and is said to exist on an average in ten per cent. of all healthy adults. In order to examine them, the contents of some of the follicles of the nose or forehead should be squeezed out and then mixed with a little oil and examined under the microscope.

Pulex penetrans or *Sandflea* (*chiggre*) is met with in many tropical and sub-tropical countries, as for example, Africa, Paraguay, and Mexico. The female bores into the skin, causing pain, inflammation, and swelling of the lymphatic glands. It is especially apt to attack the hands and feet.

FILARIA MEDINENSIS.

The *Filaria medinensis*, or Guinea-worm, is only met with in tropical countries. It generally attacks the lower extremity, especially the skin about the ankle. When it first 'bores' its way into the skin, it is very small and usually unperceived. It grows gradually for several months without causing much disturbance, until it has attained a length of from six to eighteen inches, when it looks like a piece of perfectly white whipcord. When the worm begins to make its way to the surface it gives rise to more or less disturbance, and an open sore is formed from which the worm protrudes; it may then be got rid of by winding it round a piece of card, an inch or so daily, great care being taken not to break it.

PHTHIRIASIS.

Syn. *Morbus Pedicularis, Pedicularia.*

Three species of lice are found on the human body: the

Pediculus capitis, *Pediculus corporis*, and the *Pediculus pubis* or crab louse.

The *pediculi capitis* infest the head, especially the occipital region; they are more common in children than in adults, and in women than in men. Where present in large numbers they give rise to much irritation, and in chronic cases are constantly associated with contagious porrigo or eczema of the scalp, which is chiefly due to the scratching that their presence gives rise to. When only a few exist, they can be more easily detected by looking for their ova or 'nits,' which are small, white, semi-transparent bodies firmly attached to the hairs, generally at a point about half an inch to an inch from the root. On examining them, they are seen to be shaped like an elongated cup attached to the hair by a sort of pedicle or stalk; they are glued to the hair by a material secreted by the louse, and for which no one has yet succeeded in finding a good solvent.

The *pediculus corporis* is somewhat larger than the *pediculus capitis*, but resembles it very closely in other respects. It deposits its ova not on the body, but on the clothes next the skin, and seems to prefer flannel to either linen or cotton. It especially frequents the seams of an under shirt, where the ova are often found. They multiply rapidly; Leuwenbach enclosed two females in a silk stocking which he wore day and night. At the end of six days, without visibly decreasing in size, each had deposited fifty eggs; at the end of twenty-four days the young ones had produced others in such numbers, that in the course of two months these two females might have had some 18,000 of their descendants.

The presence of these lice gives rise to very characteristic symptoms; the irritation and itching they produce is excessive, and far greater than in an ordinary case of scabies, but it is confined to the trunk, arms and thighs, and is *never found on the hands.* The eruption produced consists of small papules; these are scratched by the sufferer, and the tops torn off by his nails, so that a little blood escapes and forms a small dark clot; these little scattered clots of dried blood, together with the other marks of scratching, give the skin a very characteristic appearance. The eruption is best seen on the upper part of the back and chest, and is always confined to parts covered by the clothes. Not unfrequently urticaria is also present, and this is especially liable to be the case when children are attacked. The affection is more common in elderly people than in the young, and was formerly known as *prurigo senilis.* In cases of long standing the skin becomes of a dirty brown from increased pigmentation. It must not be concluded that because these pediculi are not found on the body therefore they have not been present; they may nearly all have been removed by a change of under clothing. The disease can be mistaken for scabies, but the characteristic appearance of the little spots of dry blood on the chest and back, and the absence of any marks on the hands and wrists, are generally sufficient for the purpose of diagnosis.

The *pediculus pubis* is generally found in the hair about the generative organs, much more rarely on the eyelashes or eyebrows. It is met with only in adults, or, rarely, on the eyelashes of children. As this louse is of small size and slow in its movements, it may easily be overlooked; the irritation is, however, unendurable, and the fact that it is confined to certain spots serves as a guide to diagnosis.

REFERENCE TO PLATES.

Syd. Soc.'s Atlas, plate 22; Hebra's Atlas, Heft 5; Fox's Atlas, plate 52.

II. VEGETABLE PARASITIC DISEASES.

Tinea Tonsurans—Favus—Pityriasis versicolor.

INTRODUCTORY.

A clear knowledge of the exact part played by vegetable fungi in the production of parasitic diseases of the skin has never yet been attained. Certain facts are known, but it is not easy to connect those facts so as to form a continuous and consistent whole. It is pretty certain that the germs of the parasites are abundant everywhere; what is it, then, that determines their growth and development? Why do we not all get ringworm, favus, or pityriasis versicolor? Of course the answer is that the parasite must find a suitable soil for its growth, and happily we do not all possess skins adapted for this purpose. Neumann, speaking of *tinea tonsurans*, says: 'The results of my experiments in the germination of this parasite confirm the observations of Hebra in so far that *herpes tonsurans and favus can be produced by one fungus, and that the penicillium*.' An able English botanist confirms this view, and tells me that he is quite unable to distinguish the parasitè of ringworm from *penicillium glaucum*. This lands us in a difficulty. Are, then, *favus* and *tinea tonsurans* really produced by the same fungus? And if so, in what does the difference consist? Or does the parasite, after all, only play a *secondary* part? These questions still remain to be answered, but in the mean time it is more convenient to consider the vegetable fungi as of *primary* importance in the production of the three common parasitic diseases, tinea tonsurans, favus, and pityriasis versicolor.

TINEA TONSURANS.

Syn. *Tinea tondens, Herpes circinatus, Herpes tonsurans, Tinea circinata, Ringworm.*

Tinea tonsurans of the scalp is essentially a *disease of childhood*. The affection but rarely attacks adults, and then it is almost always confined to the trunk, face, and limbs. It is usual to describe three stages or varieties of the disease; the first is called the erythematous or herpetic stage, and is characterised by the development of small, round, erythematous-looking patches, or rings of a pinkish colour and rather rough surface; the margin of these patches is of a brighter red than the central part, and occasionally little rings of vesicles are developed at the circumference (*herpes circinatus*); the vesicles last but a short time and may easily escape notice. Sometimes a series of rings form one within another, and thus the eruption assumes the appearance of an *erythema iris,* for which it may be easily mistaken. For the most part this early stage of ringworm is not noticed on the scalp, and it is only when the disease attacks other parts of the body that we can easily observe the forms above noticed.

The second stage of tinea is of longer duration and corresponds with changes in the structure of the hair and the development of the parasite on the surface of the skin. Bazin remarks: 'The parasite shows itself on the broken hairs and on the epidermis at the same time. On the hairs it takes the form of an asbestos-like covering, more or less complete, of a dull white colour. If it is incomplete, one sees at the centre of each little white mass formed by the fungus a black point which corresponds with the free end of a broken hair; but when the covering is complete the hairs are entirely hidden, and can only be recognised by the little prominences produced, and when these are numerous the surface looks as if covered with white frost. The fungus which is developed on the epidermis in the intervals between the hairs, forms by the reunion of its elements a flaky or laminated substance. This substance does not in reality differ from that on the hairs, only the disposition of the elements is a little different, and varies according to the locality occupied by the parasite. There is little danger of making any mistake as to the nature of these sheath-like coverings, which more or less completely surround the broken hairs in tonsure ringworm; and their existence, when clearly proved, is very valuable in diagnosis.'

In a third stage, which happily is not often reached, an acute inflammation occurs in the hair follicles, which leads to the destruction of the hair, and the formation of permanent bald patches; this is, however, an unusual result of the disease.

As a rule, there is little difficulty in the diagnosis of ringworm of the scalp, except in a very early stage before the hairs are affected, or in a very late stage when the skin and most of the hairs have resumed their normal appearance. In the earliest stage, we find on the scalp small, round, rough, or scaly patches of skin, slightly raised and attended with pretty severe itching. At this stage the hairs have not undergone any *visible* change, and hence the difficulty in the diagnosis; but nevertheless, on attempting to extract them, we find that they break off, instead of coming up by the roots. This, together with the circular form of the patch, should always make us suspect *tinea tonsurans.* It may possibly however be mistaken for pityriasis or psoriasis, but patches of pityriasis are rarely quite circular, and with psoriasis of the scalp we generally find other evidence of the disease about the elbows and knees; moreover in these latter affections the hairs can be removed entire.

On the trunk, limbs, or face *tinea tonsurans,* or as it is often called *Tinea circinata,* may be mistaken for one of the ringed forms of erythema, or for a syphilitic eruption. It may, however, be distinguished from the former by the history of the case, or by the presence of patches of unmistakable ringworm on the scalp, and by the examination under the microscope of the scales treated with Liquor potassæ. With regard to syphilitic eruptions, it is only the erythematous varieties that resemble *tinea circinata,* and these do not generally take the form of rings, or distinctly round patches; they are, moreover, unattended with itching. The history of the case, the age and general appearance of the patient, will be a further aid to differential diagnosis.

Ringworm of the scalp in its *second stage* is very easily diagnosed, for there is no other disease which resembles it. It is characterised by the formation of partially bald circular patches, the hairs of which appear to be broken off close to the skin, and have an opaque, lustreless, and often twisted appearance. The patch itself is slightly raised and scurfy, and of a different colour from the surrounding healthy tissue. Its appearance at this stage reminds one of the skin of a plucked fowl. Any attempt to remove the hairs entirely fails, for they either break with a frayed fracture, or come out without the bulb. Compared under the microscope with the healthy structure, they are seen to be very opaque, but when treated with Liquor potassæ the minute round spores of the cryptogam (trichophyton) may be easily distinguished. A well-developed patch of *tinea tonsurans* can be mistaken for no other disease, except perhaps favus.

In a later stage, however, the diagnosis is often difficult:

(1) If the hair follicles become acutely inflamed, the head may become covered with crusts which entirely mask the characteristics of the disease. In this case we should examine the hairs carefully under a microscope.

(2) Ringworm often gets so far well that no traces of cryptogam can be found; at the same time the hairs, though scanty, assume their natural appearance; the skin, however, remains in a dry scurfy state, which, when seen for the first time, may be easily mistaken for simple pityriasis or dry seborrhœa.

(3) The skin may assume a perfectly natural appearance and almost every hair recover its normal condition, and yet, here and there, scattered about the head, may be found short, opaque, twisted hairs, characteristic of the presence of the disease. These cases are most easily overlooked, and it is only by the most careful search that the infected hairs can be found.

(4) *Tinea tonsurans* occasionally produces perfectly smooth, bald, shining patches of skin, bearing a very close resemblance to *alopecia areata*, and for which they may be

easily mistaken. The history of the case will generally be a sufficient guide to a correct diagnosis. This is not, however, always the case, as *tinea tonsurans* may altogether escape notice until a smooth bald patch is formed, which first attracts attention. Sometimes one child in a family will be affected in this way, while all the others are suffering from ringworm presenting the usual features. After a time the hair grows again on these patches; they must not therefore be confounded with the permanently bald patches which result from acute inflammation of the hair follicles.

It is the occasional development of these temporary, smooth, bald patches in common ringworm which has given rise to the erroneous belief that there is a parasitic disease called *tinea decalvans, distinct* on the one hand from *tinea tonsurans,* and on the other from *alopecia areata*; no such disease really exists.

It must be admitted that the differential diagnosis between *tinea tonsurans* and *favus,* at an early stage before the sulphur-coloured crusts are formed, is often a matter of real difficulty. Under these circumstances the extraction of hairs is our only means of diagnosis; in *tinea tonsurans* the hairs break, but in *favus,* at this stage, they may be extracted with bulb and sheath complete. A subsequent examination under the microscope will also help to determine the nature of a doubtful case. The development of the characteristic yellow crusts of favus would, of course, leave no doubt as to the nature of the disease.

Parasitic sycosis is a form of *tinea tonsurans* that requires a brief notice. The disease is very uncommon in England and Germany, but is said to be met with more frequently in France. The parasite attacks the hair follicles of the beard or moustache, and leads to an inflammation resembling sycosis, but in almost all cases, the presence of common ringworm somewhere in the neighbouring parts can be detected; this serves as a valuable guide to diagnosis. Another point worthy of note is, that whereas simple sycosis often remains strictly localised to one part of the beard, parasitic sycosis almost always spreads continuously. A microscopical examination of the hairs will, of course, be of the first importance in doubtful cases.

Eczema marginatum is another variety of *tinea tonsurans* which is especially liable to attack the genitals, and the inner sides of the thighs in that neighbourhood, and also the gluteal region; its development seems to be much favoured by warmth, friction and moisture. It is more common in men than women, and is said to be especially met with among shoemakers and cavalry soldiers, in whom the sitting posture and perspiration promote its development. The disease takes the appearance of a circinate lichen, with a brownish-red, raised border, which always spreads at the circumference of the patch, and gradually invades new tissue, while the central parts heal. In cases of long standing the skin is apt to become thickened, which is probably chiefly due to the scratching and rubbing to which it is subjected. The disease is most inveterate, and is attended with much itching. Neumann sums up his conclusions with regard to this disease, thus: '(1) A parasite coming upon an already existing cutaneous inflammation, with superficial loss of epithelium (intertrigo), may alter the form of an ordinary eczema to that of *eczema marginatum.* (2) An existing parasitic disease, especially *herpes tonsurans* or *pityriasis versicolor*, can, favoured by the locality, develop into the form known as *eczema marginatum.* (3) In an earlier stage of the disease, the fungus is almost always demonstrable; in inveterate cases it is absent as a rule. (4) The fungal elements present in *eczema marginatum* develop, on cultivation, into *penicillium glaucum* or *trichothecium.*'

Treatment.—There is a very important question which is constantly asked by patients and their friends, and that is as to the communicable nature of ringworm, and at what period it ceases to be contagious. Now, strictly speaking, it is contagious until it is cured; indeed, as long as scurfy spots remain, even though the hair be growing feebly, it may possibly be propagated. It is, however, far more contagious when it first appears, before any remedies have been applied, than it is while under treatment. The best remedy to prevent its spreading amongst children, when they are obliged to associate together, is the carbolised glycerine of the British Pharmacopœia, either pure or diluted with a little more glycerine; it should be well rubbed all over the scalp every morning. This acts in two ways: (1) The carbolic acid produces its usual effect on organised matter, and (2) the glycerine prevents particles of scurf from being dispersed. Of course, the chief objection to this treatment is that the smell of the carbolic acid is very disagreeable to some people; on the other hand, it is sometimes impossible to separate children entirely, and any means of preventing the propagation of the disease is valuable. In addition to this, the carbolised glycerine has a distinct curative effect.

And now as to the *treatment* of this troublesome malady. Nothing is easier to cure than *tinea tonsurans* of the trunk, or more difficult to deal with than the same disease when it is well established on the scalp. It is important to understand how the remedies in common use act. They may be conveniently divided into two classes: (1) those which act by setting up sufficient inflammation in the skin to lead to the destruction of the disease; (2) those of a milder kind, which act simply as antagonistic to the development of the *trichophyton tonsurans.* To the former class belong such remedies as acetum cantharidis and strong acetic acid; to the latter belong sulphur ointment, the white precipitate ointment, and sulphurous acid lotion. Many remedies combine, as it were, these two properties; as, for example, chrysophanic acid ointment, iodine liniment, and strong carbolised glycerine. How are we to choose between all these and many other remedies? We must be guided by circumstances, and take into consideration both the age of the patient and also the extent of the mischief. *Strong remedies are always contra-indicated in very young children*; a little tincture of iodine painted on once a day for a few days, followed by the use of the white precipitate ointment, is all that is necessary. In older children stronger remedies must be used, but even then we must be guided in our choice by the extent of the mischief. It is very unwise to make a *large* sore place on the scalp, as it will very likely give more trouble than the ringworm itself. If, however, the disease is in an early stage, and consists of one or two small circumscribed spots, the best plan is to cut the hair short all round the spots, and apply with a brush Coster's paste, acetum cantharidis, or iodine liniment. At this stage a few applications will sometimes arrest the mischief. A single painting with pure carbolic acid is thoroughly effective, but it is a strong remedy, and gives some pain. It is very unwise to trust strong remedies to unskilled hands. When the disease extends over a large surface we must be content with using milder measures; tincture of iodine of *double strength* painted on every day is a good and safe mode of treatment. This may be followed up by the use of the nitrate of mercury ointment, diluted according to circumstances, or an ointment containing the red and white precipitate of mercury and sulphur, or the oleate of mercury (five to ten per cent.). For many years I have used in certain cases Goa powder or chrysophanic acid ointment (thirty grains to the ounce is usually strong enough), and I have found it a very effective remedy, but there are great drawbacks to its general use. First, it stains everything with which it comes in contact, and in the second place we are uncertain as to the amount of inflammation it may set up; some children bear it well, while in others it produces so much irritation, swelling, and discolouration of the skin as to alarm those who use it. It must, therefore, be used with caution, and patients should be warned of its properties; nevertheless, I repeat, it is a very effective remedy.

Success in the treatment of ringworm will depend on the judicious choice of remedies, according to the stage of the disease and the other circumstances of the case. We have to steer, as it were, between setting up too much inflammation on the one hand and not using sufficiently strong means on the other. Whatever treatment, however, is adopted, a certain number of cases will defy our best efforts, and get well only after years of tedious care. As a rule, shaving the head is unnecessary; but the hair should be kept quite short. Skull caps are best avoided, as liable to propagate the disease. With regard to epilation, which is so largely used in France as a mode of treatment, I do not find that it is often necessary; it is, however, occasionally useful. The *extraction* of the diseased hairs will sometimes shorten the treatment required, but it is by no means easy to extract them, and breaking them off at their roots is worse than useless. Dr. Alder Smith has recently recommended treatment by croton oil so as to produce an artificial Kerion in those rare cases of tinea which are otherwise incurable. Lastly, most observers agree that ringworm is often associated with a generally unhealthy condition of the scalp, which is badly nourished; this is especially noticeable in the later stages of the disease. Under these circumstances tonics, such as iron and arsenic, are often very useful. This is quite in accordance with the fact that many strictly *local affections* are influenced by general treatment.

REFERENCE TO PLATES.

Tinea tonsurans. Hebra's Atlas, Heft 2; Fox's Atlas, plate 54.

Tinea circinata. Syd. Soc. Atlas, plate 36; Fox's Atlas, plates 55 & 56.

KERION.

Kerion is a peculiar and rare form of circumscribed follicular inflammation of the scalp, which was first described by Celsus. It generally follows or is associated with common ringworm, one, two or more of the patches of tinea becoming inflamed, while others may run the ordinary course. Although kerion is met with chiefly in connection with ringworm, it occasionally occurs independently of that disease. The affection consists in an inflammation of the hair follicles, which become dilated and discharge a transparent, sticky fluid, which has been compared to honey. The portion of the scalp affected forms a soft, raised swelling which feels boggy to the touch, and strongly reminds one of a subcutaneous abscess. The affection is of a very chronic nature, and sometimes leads to the complete destruction of the hairs of the part affected, so that a permanent bald spot is produced.

Reference to Plates.

Syd. Soc.'s Atlas, plate 35.

FAVUS.

Syn. *Tinea favosa, Porrigo lupinosa* (*of Willan*).

Definition.—Favus is a contagious disease of very chronic nature, characterised by the formation of peculiar sulphur-coloured crusts.

Favus is more common on the Continent than in England, where it is a rare disease, and met with only amongst the poor and dirty population of towns. It may occur on any part of the body, but its favourite position is the scalp. It first shows itself in small, scaly, irritable patches very like those of *tinea tonsurans*; the hairs quickly lose their lustre, but they do not, at an early stage, become broken and twisted as in common ringworm; moreover, they are easily extracted entire. A little later, small yellowish-white concretions, about the size of a pin's head, form on the scales round the hairs; at first these crusts are convex, but soon a central depression appears, and as the favus increases in size the hollow deepens; thus we have developed little yellow cups as large as a split pea, or even larger, with one or two hairs passing through the centre of each; on the inner aspect of these are seen a series of concentric rings or ridges, the outer parts of which are last formed, and are always of a darker colour than the central portion. At a later stage the charactéristic cupped appearance is lost, and we have simply a raised, irregular, yellow mass, which in time loses its bright colour, becomes detached, and falls off, leaving a dark red stain. All these changes can be best seen when the favus cups are isolated, for when they are crowded together the regularity of their formation is hindered. The crusts have a peculiar and very disagreeable smell, like that of mice.

Where a full-grown favus is forcibly removed, we find underneath it a cup-like depression which has all the appearance of being produced by pressure; this is either covered with smooth, shining epithelium or sometimes ulcerated. When the disease has lasted for a considerable time, the hairs become thin and short, harsh, colourless and quite dull, and the part affected may gradually become permanently bald. In connection with favus we often see on the body small, erythematous-looking rings of about the size of a threepenny piece, and bearing a close resemblance to common ringworm of the trunk, except that the rings never attain the large size of those of the latter disease. It is the presence of this eruption on the body, together with the striking resemblance which favus in an early stage bears to *tinea tonsurans*, which has led observers to believe that these two diseases often occur coincidently. That they are occasionally met with together is only what we might expect, since both are diseases of childhood, but it would be erroneous to suppose that this is commonly the case.

If a small piece of favus crust is treated with a little diluted Liquor potassæ, and then examined under the microscope with a power of about 500 diameters, the spores and mycelium of the cryptogam (*achorion*) may be easily seen. The disease has been successfully propagated by inoculation, but not without considerable difficulty. Favus is said to be common in small domestic animals, such as rabbits and cats, but especially in mice; from them it is believed to be transferred to cats, and thence occasionally to the human species.

The *differential diagnosis* of favus when the sulphur-coloured crusts are present, is very easy; but in an early stage, when it consists of small reddish scaly patches, it is not distinguishable from common ringworm. At this period, however, the hairs are unaffected and can be easily pulled out entire, with perfect bulbs, whereas in *tinea tonsurans* the hairs are very quickly attacked, and break on attempting to extract them. Again, in a late stage of chronic favus, when the skin is scaly and no distinctive crusts are present, the disease may possibly be mistaken for a chronic, dry eczema, but a careful examination will lead to a correct diagnosis. It should also be remembered that favus may be masked by an attack of eczema.

REFERENCE TO PLATES.

Favus. Cazenave's Atlas, plates 30, 31, and 33 (all good); Syd. Soc. Atlas, plate 1 (Hebra); Fox's Atlas, plate 54.

PITYRIASIS VERSICOLOR.

Syn. *Tinea versicolor*.

Definition.—*Pityriasis versicolor* is generally regarded as a disease produced by a vegetable parasite. It is characterised by the development of pale yellow or fawn-coloured patches on the skin of the trunk.

Symptoms.—The disease usually begins by the formation of small yellowish spots, varying in size from a pin's head to a split pea, and scattered over a limited area. Most of these spots are at first round, but in the course of a few weeks or months, the central ones unite, forming large irregular patches, beyond the margin of which many little spots remain isolated and scattered. These outlying members of the group give to the whole eruption a very characteristic appearance. The affection is very symmetrical, affecting both sides of the body equally. The colour of the eruption is peculiar, and much influenced by attendant circumstances, such as the complexion of the individual, the age of the patch, and the amount of rubbing to which it is subjected. It was formerly believed that the colour depended entirely on the cryptogam, but we now know that it is much influenced by the pigmentation of the skin. In individuals with reddish hair, versicolor is usually fawn-coloured; in the sallow or pale it is light yellow, while in those of dark complexion it is sometimes a dingy brown. In some cases the affection is almost unattended with subjective sensations, in others the itching is very considerable, and gives rise to scratching and consequent congestion of the patches, which assume a pink colour or become distinctly inflamed. The skin affected is a little raised and very slightly scaly, though in some instances this latter feature is sufficiently marked to justify the use of the old name pityriasis.

Although the form, colour, and position of versicolor taken together are enough for the purpose of diagnosis, yet the most characteristic feature of the disease is only observed by aid of the microscope. If a few scales are scraped from a patch, treated with a little Liquor potassæ, and then examined under a power of from 300 to 500 diameters, the (conidia) spores and filaments of the cryptogam are easily seen. They consist of many short tubelike structures, which branch and interlace freely, and spores (conidia), which are small, round, well-defined bodies arranged in large groups, and are often compared to a cluster of grapes.

There are several points of interest connected with *pityriasis versicolor* which have more or less bearing on the diagnosis of the disease. (1) As to contagion, the evidence is very strong that under certain circumstances the affection may be propagated from person to person; it has in many instances passed from husband to wife, and *vice versâ*; nothing, however, short of sleeping for a long time in the same bed is likely to lead to its transmission by contact. (2) Heat and moisture are undoubtedly favourable to the progress of the malady, and in accordance with this we find that it chiefly attacks those who have moist, warm skins, while those who do not perspire readily generally escape. For example, it is very common in phthisical patients, and quite unknown in those who suffer from xeroderma or ichthyosis. (3) It is confined to certain parts of the body, chiefly to the trunk, but it often extends down the upper arm and thigh; it is hardly ever met with on the face or scalp, or on the leg below the knee, while on the soles and palms it is totally unknown. (4) Perhaps the most remarkable peculiarity of this affection is that it is never met with in young children, and is very rare before puberty; so that about the time that we cease to be liable to attacks of tinea tonsurans of the scalp we become liable to tinea versicolor of the trunk. The disease does not occur in old people, and we may say roughly that the age between puberty and fifty is the period of life which is subject to its attacks.

The differential diagnosis of *pityriasis versicolor* is not difficult. The only affections with which it can be confounded are simple pigment spots (chloasma) and some forms of dermato-syphilis. In both cases a microscopical examination of the scales would determine the point at once; but, apart from that, pigment spots are perfectly smooth, do not itch, and often occur in exposed parts of the body, as the hands and face; moreover, their shape is quite different from that of versicolor. It is no doubt true that versicolor is sometimes mistaken for syphilitic pigment spots of the trunk; but apart from the history of the case, which is often a sufficient guide to diagnosis, we rarely see dermato-syphilis assuming either the colour or shape of *pityriasis versicolor*. The pale buff or fawn colour is very characteristic of versicolor, while the shades of dirty brown and copper colour are commonly met with in syphilides. The absence of itching in the specific spots and the parts affected is also of some slight diagnostic value. I notice in a recently published edition of a text-book on diseases of the skin that the 'circular form' of the syphilitic spots is given as a mark of distinction from versicolor; but this is an error, for specific spots of the kind that could be confounded with the latter affection do not generally take a circular form, while, on the other hand, small isolated patches of versicolor often do. On the whole, however, there ought to be little difficulty in the differential diagnosis.

Treatment.—Pityriasis versicolor is easily cured by the following method: The skin should be well rubbed with a piece of flannel and warm soap and water every night, and when quite dry an ointment containing a little sulphur and white precipitate applied. If a lotion be preferred, the sulphurous acid or hyposulphite of soda lotion answers very well. There is one point about the treatment of this affection which is worthy of note, and that is, that if the slightest portion of the pityriasis be left uncured, the affection is sure to spread again from that point, so that it is generally advisable to carry on the treatment for some time after the eruption has quite disappeared. Flannel next the skin is favourable to its development, silk much less so.

REFERENCE TO PLATES.

Pityriasis versicolor. Syd. Soc. Atlas, plate 12; Fox's Atlas, plate 57.

CHAPTER X.

FEIGNED DISEASES OF THE SKIN ASSOCIATED WITH HYSTERIA.

THE late Mr. Startin, in the *British Medical Journal* for 1871, called especial attention to certain cases of artificial production of skin affections in hysterical women and girls. I have myself met with a few similar examples, one of which I shall quote. A girl of about seventeen was brought to me by her mother, who said that she was suffering from an eruption on her arm. On examining the arm (the left) I found a number of superficial concave sores, of about the size of a threepenny piece or a little larger, most of them covered with scabs. The girl was evidently of an hysterical temperament, but beyond that there was nothing in her way of answering questions to make one suspect the artificial production of these sores. However, on a careful examination, I found one little yellow spot on the skin which looked as if it had been recently stained by nitric acid. The sores also were just such as might have been produced in this way. I further noted that they were all on the *left* forearm. I therefore privately asked the mother whether there was any nitric acid at home that the girl could get at, and she admitted that there was, but was very indignant at my suggesting that the eruption could have been produced in that way. However, she consented to have her daughter watched, and the result was as I suspected. There was no apparent cause for this trick on the part of the girl except hysteria.

The following are brief sketches of some of Mr. Startin's cases :—He mentions that he was once consulted by a married woman of about five and thirty, childless, and who suffered from retention of urine and other well-marked hysterical symptoms. The object of her visit was to get cured of an obstinate eczematous inflammation about her eyes, with ecchymosis of both conjunctivæ and one eyelid. The patient was ordered suitable remedies, but without the desired effect; she at the same time maintained that the only thing that gave her relief was a lotion she obtained from a druggist, and which she persisted in using. On enquiring of the druggist, the lotion turned out to be a hair-wash containing ammonia and cantharides; hence the *eczema palpebrarum*. Mr. Startin says: 'I got little credit from my patient or her friends by exposing her proceedings, but the hair-wash was discontinued, and a cure accomplished by a lead lotion.' Another case came under his observation, where an hysterical young woman, aged twenty-one, produced an eruption resembling *erythema marginatum* by means of flour of mustard applied in a wet state with a large camel's-hair brush. A sister of this patient happened to mention that nothing appeared to do her sister so much good as a mustard emetic, but that the *next day* the eruption was always worse: this remark gave the clue to the discovery of the trick. He also records a curious case of a young lady who suffered from a peculiar discolouration of the skin. She had been seen by several medical men, who had given various opinions as to its nature; it had been called melanosis, pityriasis nigricans, and congenital syphilis. Her face and some other parts of the front of the body were covered with a dark brown or black secretion, which could not be washed off with water or spirit, and when soap and water was attempted the pain produced was so great that it could not be endured by the patient; the young lady thought, however, that she could bear the application of a soft camel's-hair brush, *dipped, as she sup-*

posed, in water, but really in ether; this, much to the surprise of the patient, removed the pigment, which turned out to be a mixture of candle black and grease. A somewhat similar case is recorded of a curious black incrustation which occurred on the neck of a young lady who suffered from hysterical aphonia and other nervous symptoms. This black concretion was supposed to be produced by hæmorrhage from the skin, which formed a blackish crust of coagulated blood, but which turned out to be chiefly extract of liquorice, mixed with cutaneous scales and hairs. The patient and some of her friends were very indignant at the exposure in this instance.

In a case of artificial pompholyx in a girl of seventeen, brought to the Blackfriars Hospital, one of the blebs was punctured, and a piece of litmus paper applied, which produced (contrary to the usual result) a vividly *acid reaction.* This gave a clue to the diagnosis, which turned out to be the application of acetum cantharidis. To the foregoing examples many more might be added, but they are sufficient for my purpose, which is simply to illustrate a fact, that we must expect occasionally to meet with similar cases in practice; and, at the same time, that we must be very wary in dealing with them, for weak-minded friends unintentionally, but almost invariably, shield and encourage the hysterical sufferer.

CHAPTER XI.

THERAPEUTICS.

In the treatment of skin diseases the first point demanding our attention is the general or constitutional health of our patient, the state of which should be carefully investigated and dealt with just as if no skin disease existed. For example, we should treat a chlorotic or gouty patient suffering from eczema just as if no eruption were present, and by so doing we may often succeed in curing the eczema without specially treating it. Such a course is not incompatible with using any needful external remedies. On the other hand, as I have before stated, eruptions of the skin which were originally due to internal or constitutional causes *often last long after those causes have disappeared*; that is, they become strictly local affections, to be dealt with by strictly local means. Formerly little attention was paid to the local treatment of skin diseases, but of late years the tendency has been, I think, in the opposite direction, and rather to neglect general measures, under the belief that most skin affections can be cured by local means alone. The fact is, that in a large proportion of cases the most satisfactory results are obtained by combining the two methods.

I propose in the present chapter to devote a small space to a brief sketch of those spas which are most useful in dealing with chronic skin affections and gout; the remainder of the chapter being occupied with formulæ and remarks on the use of mineral waters, baths and drugs in the treatment of skin diseases.

SPAS OF EUROPE.

The following easily accessible spas are those most useful in the treatment of skin affections:—

Aix-la-Chapelle.—This town is situated in a flat district and has a mild climate. The waters are hot and sulphurous; they also contain a considerable quantity of chloride of sodium. There are four principal springs, which differ in temperature and also slightly in the proportion of the salts they contain. The bathing establishments are excellent and on a large scale. The baths and waters are chiefly useful in chronic dermatosyphilis and psoriasis. I do not find that patients suffering from eczema bear the treatment as well as that of several other spas, and therefore I seldom recommend Aix-la-Chapelle for eczema.

Aix-les-Bains has a warm climate, and is decidedly hot in July and August. It is chiefly frequented by those requiring warm baths and douches, the arrangements for which are excellent. The water contains such a small quantity of mineral constituents that for use as a medicine it may be regarded as very mild.

Ems.—This spa is visited for the most part by those who suffer from chronic catarrh of the stomach or bronchial tubes, but it is also very useful, indeed one of the best in Europe, in cases of chronic catarrh of the skin (eczema), especially in middle-aged people. The waters are mild, warm and alkaline, the chief salt being bicarbonate of soda. The different springs vary in temperature, but their composition is nearly identical.

Homburg is one of the most fashionable spas of Europe. There are four principal springs, the temperature of which is about 50° Fahrenheit. The waters are mildly purgative, and vary in strength. The active salt is chloride of sodium.

Homburg is suitable for gouty people, and therefore sometimes agrees with those who suffer from gouty eczema; but it must not be forgotten that chloride of sodium is not the best laxative for those who have simple eczema.

Karlsbad is one of the most important spas in Europe; it is situated about 1,000 feet above the sea level, but is very hot in the middle of summer. There are many hot springs, the waters of which vary in temperature and strength. The salts they contain in largest quantities are sulphate and carbonate of soda and chloride of sodium; some contain also a considerable quantity of sulphate of potash. Their action is alkaline and purgative. Karlsbad is one of the best spas for the treatment of chronic gout and rheumatism, and for those forms of eczema and psoriasis which are associated with the gouty or rheumatic constitution.

Kissingen is situated in a valley the climate of which is mild; it is apt to be somewhat too hot and close in the height of summer. The season lasts from May to September. The water of the springs has a temperature of about 50° Fahrenheit, but the quantity of salts contained varies remarkably in the different springs. They are all highly charged with carbonic acid gas. Some of the waters are purgative; others, such as the Maxbrunnen, are but very slightly laxative. The chief salt in all is chloride of sodium. Kissingen suits many dyspeptic and gouty people, and usually agrees well with those that suffer from eczema and psoriasis, associated with or dependent on dyspepsia or gout.

Kreuznach is conveniently situated and has a warm and dry climate. The waters are especially noted for the iodine and bromine they contain, but the quantity is really small, very much less, for example, than the Woodhall water. Chlorides of sodium and calcium are present in large quantities, so that the waters are purgative. This spa is very well suited for chronic dermatosyphilis and scrofulous affections of the skin, and not unsuitable for gouty eczema and psoriasis.

La Bourboule is noted for its arsenical waters, which are well suited for *scrofulous* diseases of the skin, and eczema.

Leukerbad is situated at the foot of the Gemmi, at a height of about 4,300 feet above the sea. The climate is fine, bracing and Alpine, and well suited to the hottest season of the year. The springs may be regarded as of nearly pure warm water. The special peculiarity of the baths is that patients can walk about half the day in a continuous warm bath, which is common to all. Patients of both sexes are seen reading, talking, and playing chess together on floating tables. These baths are very suitable for chronic cases of psoriasis that will not yield to ordinary methods.

Plombières is situated in the Vosges at a height of 1,300 feet; it has a fine and rather bracing climate during summer. There is an abundant supply of hot water, and the baths are excellent. The waters contain but a very small quantity of salts. It is a suitable place for the treatment of chronic pemphigus, psoriasis and chronic gouty eczema, more especially the two former. Hebra's 'continuous baths,' provided with beds, are to be had here, so that the patient can remain immersed for days together. Altogether it is one of the most satisfactory spas in Europe.

St. Moritz is situated at a height of more than 5,000 feet above the sea. The climate is bracing and Alpine, and in some seasons very cold; it is, therefore, only suitable for those who can bear great changes of temperature. The season is during July and August. The springs are cold, and contain a small quantity of iron and a large quantity of carbonic acid. The latter ingredient often disagrees with patients, and produces a most uncomfortable distension of the bowels. The baths, for which the water is warmed artificially, are pleasant and astringent. Patients who frequent St. Moritz derive more benefit in most instances from the Alpine climate than from the mineral waters, though the latter often have the credit of the cures effected.

Royat near Clermont is about 1,400 feet above the sea. The waters are mildly chalybeate and alkaline, and intermediate between those of Ems and Plombières. Royat is suitable for the treatment of eczema of a rheumatic type.

Spa is conveniently situated at an altitude of about 1,000 feet. The climate is healthy, but rather subject to changes of temperature. It is often cool in the early part of the season. The springs are not unlike those of St. Moritz, but they contain more iron and less carbonic acid, and are therefore preferable for drinking purposes where a tonic mineral water is required. The baths are artificially warmed, and excellent when an astringent water is indicated.

Vichy is one of the best spas in Europe for the treatment of chronic eczema and psoriasis in middle-aged or elderly people. The climate is warm, and in the height of summer hot. Much stress is laid on the different strengths of the springs, but as a matter of fact they differ but little except in temperature. The chief salt in all is bicarbonate of soda. The baths are very useful in cases of chronic psoriasis.

Wildbad, in the Black Forest, has an altitude of 1,300 feet, and a good summer climate. The baths are excellent, and suitable when simple warm baths are required in the treatment of gout or psoriasis. The water is slightly alkaline, but contains so small a quantity of salts that it may be regarded as almost pure.

English Spas.—Of English spas, Bath, Harrogate and Buxton are the most important. The first is justly celebrated as almost the only hot spring in England. The climate of Bath is one of the best in England. The waters are not very active, but the baths are excellent and especially well suited for the treatment of those who require a course of warm baths, but who cannot conveniently leave England.

for that purpose. Harrogate is justly celebrated for its saline-sulphur and iron springs; the stronger sulphur waters are mildly purgative and chiefly useful in the treatment of chronic indigestion. The climate of Harrogate is rather bracing, and the best part of the season is from the middle of June to the end of August.

IMPORTED MINERAL WATERS.

The chief imported mineral waters used in the treatment of skin affections are of a purgative kind; amongst the most important of these may be mentioned Karlsbad, Friedrichshall, Hunyadi Janos and Pullna. Of these, Friedrichshall is sometimes objectionable in the treatment of eczema on account of the large quantity of common salt it contains; Pullna, on the other hand, is a very active purgative water, entirely free from chloride of sodium. The best time to take these saline waters is about half an hour before breakfast, and a little warm water may be added to most of them with advantage. The chief iodised waters are from Woodhall, Purton, and Kreuznach; of these, Woodhall water is much the strongest; all the Kreuznach waters contain very large quantities of chloride of sodium. The most celebrated alkaline waters are those of Vichy; there are several springs which supply waters of different strengths, but in all the chief salt is bicarbonate of soda. It is worthy of remark, that the habitual daily use of large quantities of alkaline waters of any kind is injurious, and apt to produce an irritable condition of the bladder. The fact that highly acid urine will sometimes make the bladder irritable is known to everyone, but that alkaline urine will produce a like effect is often overlooked.

ARTIFICIAL BATHS.

The baths used for the treatment of skin affections are of the ordinary long kind, which admit of the complete immersion of the patient, and when this immersion is to be continued for a considerable time, arrangements must be made by means of a pillow and blankets to allow the patient to rest in a comfortable position. The quantity of water used is estimated at about thirty gallons, and the temperature should be from 90° F. to 100° F.; some people can, of course, bear with advantage a higher temperature than others.

(1) *Bran Bath.*—An infusion of three or four pounds of bran should be made with boiling water; this may be strained through a coarse cloth, and the liquor mixed with the water of the warm bath; a pound of gelatine may be added if desired. Bran baths are used chiefly in dealing with skin diseases in which there is much itching; baths must, however, be used with great discretion in the treatment of eczema, which is often aggravated by the application of water to the skin; bran baths are less objectionable than ordinary washing with soap and water. Chronic papular and *scaly* eczema, irritable psoriasis and lichen urticatus are the common forms of eruption that derive most benefit from bran baths.

(2) *Alkaline Baths* are easily made by adding from ℥ij to ℥iv of carbonate of potash or soda to the ordinary warm bath; this may be combined, if desired, with the bran bath. For most purposes potash is to be preferred to soda. Alkaline baths are useful in scaly affections, especially psoriasis; they also often give relief in lichen urticatus.

(3) *Sulphur Bath.*—The most convenient form of sulphur bath is made by dissolving from ℥ij to ℥vj of sulphuret of potassium in water, and then adding it to the water of the bath. This is chiefly useful in the treatment of scabies, but it should be combined with the inunction of sulphur ointment to the regions of the body especially known to be affected by itch, such as the hands, nates, &c. The chief objection to sulphur baths is their rather disagreeable smell.

(4) *Iodine Bath.*—This is not much employed, but is

occasionally useful in the treatment of chronic syphilides extending over a large surface of skin. It may be made by dissolving iodine ʒss, iodide of potassium ℥ss, and glycerine ℥ij in the water of the bath.

CAUSTICS.

(5) *Solution of Potassa Fusa.*—Potassa fusa will nearly dissolve in an equal weight of water. This forms a most useful and manageable caustic. Especially employed in lupus, rodent ulcer, and in the destruction of the small vascular nævus.

(6) *Vienna Paste.*—Unslaked lime and caustic potash in equal parts. When required for use, it may be mixed with alcohol so as to form a paste; this is a very powerful caustic.

(7) *Chloride of Zinc.*—Equal parts of chloride and oxide of zinc is a convenient caustic; it can be applied in the form of a powder or paste. It is especially useful in some forms of ulceration. The chloride and oxide should be thoroughly mixed with a pestle and mortar and preserved in a stoppered bottle.

Besides the above-named caustics, a saturated solution of nitrate of silver in water and the acid nitrate of mercury of the Pharmacopœia are both useful when comparatively mild caustics are required.

LOTIONS.

Lotions may be conveniently divided into two groups: (1) those which should never be allowed to get dry, and which must therefore be applied on lint or rag and frequently renewed; (2) those which are intended to dry quickly. The type of the former is ordinary water dressing or lead lotion; the type of the latter, the oxide of zinc and calamine lotion. Many lotions may, however, be used either way. In acute inflammations the lotions should not, as a rule, be allowed to dry, while in the more chronic discharges exactly the contrary treatment is sometimes required.

(8) *Oxide of Zinc Lotion.*—Oxide of zinc, ʒij; calamine, ʒij; glycerine, ʒss; lime water, ℥ij; rose water, ℥vj. This lotion, or some modification of it, is a very useful drying application, and much used in the treatment of eczema and acne rosacea. It is often necessary to make the lotion much thicker than is given in the above recipe, so that it may be conveniently applied with a large camel's hair brush, and leave a good coating of oxide of zinc on the skin. A similar and rather more soothing lotion may be made by substituting prepared chalk for the oxide of zinc, a little dilute hydrocyanic acid being also added if desirable.

(9) *Borax Lotion.*—Borax, ʒj to ʒij; glycerine, ʒj; elder-flower water or camphor water, ℥viii. This is a useful lotion in irritable papular and scaly eruptions, especially of the scalp; a little bicarbonate of soda and hydrocyanic acid or morphia may be sometimes added with advantage. In the latter form it is often useful in pruritus vulvæ.

(10) *Bicarbonate of Soda Lotion.*—Bicarbonate of soda, ʒj to ʒiij; glycerine, ʒj; elder-flower water, ℥viii. Useful in the treatment of lichen urticatus, urticaria and other irritable eruptions. Hydrocyanic acid may be added.

(11) *Zinc and Alum Lotion.*—Sulphate of zinc, gr. 20; alum, gr. 40; glycerine, ʒj; rose water, ℥viii. An astringent lotion sometimes useful in eczema, especially eczema intertrigo and acne rosacea.

(12) *Nitric Acid Lotion.*—Dilute nitric acid, ʒss to ʒj; dilute hydrocyanic acid, ʒj; liquor carbonis detergens, ʒj to ʒij; glycerine, ʒij; water, to ℥viii; nitrate of bismuth may be sometimes added with advantage. A very useful lotion in pruritus, scaly eczema and irritable psoriasis. In dealing with some forms of pruritus, a few grains (2 to 4) of perchloride of mercury may be substituted for the liquor carbonis detergens.

(13) *Perchloride of Mercury Lotion.*—Perchloride of mer-

cury, gr. ij to gr. iv; dilute hydrocyanic acid, ʒj; emulsion of almonds, ℥viii, or the perchloride may be combined with tincture of benzoin ʒij and water ℥viii instead. These are useful lotions for acne, acne rosacea, and pruritus unattended with excoriations. The yellow and black wash of the Pharmacopœia may be also mentioned as often useful in pruritus. Perchloride of mercury may also be combined with the following muriate of ammonia lotion, namely, tincture of benzoin ʒij, orange-flower water ℥viii, muriate of ammonia ʒj to ʒiij. Chiefly useful in the treatment of pigment spots.

(14) *Hyposulphite of Soda Lotion.*—Hyposulphite of soda, ʒij to ℥ss; glycerine, ʒij; water, to ʒviii. This lotion is used in the treatment of pityriasis versicolor, tinea tonsurans and pruritus vulvæ. It may be combined with sulphurous acid, so as to form a stronger parasiticide.

(15) *Sulphur Lotion.*—Precipitated sulphur, ʒij to ℥ss; rectified spirits, ʒij; glycerine, ʒj; lime water, ℥ij; rose water, to ℥viii. This lotion is used in the treatment of acne; it should be applied at night, allowed to dry on, and washed off in the morning.

(16) *Soft Soap Lotion.*—Potash soap, ℥j; proof spirit, ℥iss; water, to ℥vj; oil of lavender, ♏xx. Dissolve the soap in the spirit and water, filter, and add the oil of lavender. This lotion may be made stronger if required. It is very useful in the treatment of acne and psoriasis; in dealing with the latter affection the soap lotion should be well rubbed in and allowed to dry and remain on all night. This lotion may be combined with the different tars, such as the oil of cade, oleum rusci, or liquor carbonis detergens, or with terebene. The addition of tar makes it more effective in the treatment of psoriasis.

SOLUTIONS.

Strong Lotions or Solutions should be painted on with a camel's hair brush and allowed to dry on.

(17) *Solution of Nitrate of Silver.*—Nitrate of silver, gr. 15; spirit of nitrous ether, ℥j. An ounce of nitrous ether will just dissolve 15 gr. of nitrate of silver; if a stronger solution is required, a mixture of ether and water or distilled water must be used. The advantage of the ether solution is that it dries quicker and sticks better on an inflamed or greasy skin. It is almost impossible to enumerate here all the cases in which nitrate of silver is applicable to the treatment of skin affections, but it is especially useful in chronic eczema, particularly when it exists between the toes or about the mamma. In erysipelas of the superficial creeping kind it is invaluable, and in pruritus vulvæ it is usually the best application.

(18) *Coster's Paste.*—Iodine, gr. 120; colourless oil of tar, ℥j. This is a very strong solution, and is one of the best in the treatment of ringworm of the scalp in an early stage; it should be applied with care. The 'colourless oil of tar' is made by the distillation of tar; it loses many of the properties of tar in the process.

(19) *Solution of Iodoform.*—Iodoform, ʒj; ether, ℥j. To be painted on with a camel's hair brush. Used in the treatment of sluggish ulcers, especially of a syphilitic kind, and soft chancres.

(20) *Solutions of Iodine and Ammonia.*—Tincture of iodine and solution of ammonia (P. B.) in equal parts.

One of the best applications for chilblains; it should be painted on with a camel's hair brush.

(21) *Glycerine of the Subacetate of Lead.*—Acetate of lead, 5 oz.; oxide of lead in powder, 3½ oz.; glycerine, ʒxx; distilled water, ℥ij.

Mix and boil for a quarter of an hour, then filter and evaporate to one pint. This is useful in the dry and hard condition of the cuticle of the palm and sole, which is produced by chronic eczema, but does not suit if the inflammation is active, and there is anything like an excoriated surface, as it is then too irritating.

Mixtures.

(22) *Sulphate of Iron and Magnesia Mixture (Acid).*—Sulphate of iron, gr. 8; sulphate of magnesia, ʒij to ℥j; dilute sulphuric acid, ♏40; spirits of chloroform, ♏40; syrup, ʒj; peppermint water, to ℥viii. This mixture or some modification of it is most useful in the treatment of ordinary eczema in adults. Quinine or strychnine may be added in those cases in which a stronger tonic is required.

(23) *Sulphate of Iron and Soda Mixture (Alkaline).*—Sulphate of iron, gr. 8; sulphate of soda, ʒij to ℥j; bicarbonate of soda, ʒij; spirits of chloroform, ♏40; tincture of quassia or calumba, ℥j; syrup, ʒij; water, to ℥viii. This mixture is similar to the preceding, but alkaline instead of acid; it is well suited to the treatment of ordinary eczema when alkalies are indicated. Potash may be substituted for soda, and sulphate of magnesia for sulphate of soda. A grain of quinine or a little tincture of nux vomica may be added to each dose if required. The quinine is, of course, precipitated, and forms a disagreeable-looking but effective mixture.

(24) *Citrate of Potash Mixture.*—Citrate of potash, ʒij; liquor ammoniæ acetatis, ℥ij; glycerine, ʒij; water, ℥viii. This mixture may be combined with citrate of iron or with tincture of colchicum. It is useful in dealing with eczema and psoriasis in gouty people.

(25) *Salicylate of Soda Mixture.*—Salicylate of soda, ʒij; water, ℥vj; dose, ℥j.

Salicylate of soda is sometimes useful in the treatment of the different forms of erythema associated with symptoms of rheumatism. It is also useful in some eruptions associated with gout. The mixture may be combined with alkalies, colchicum, or iodide of potassium.

(26) *Iron and Arsenic Mixture.*—Fowler's solution, ʒj;

syrupi, ℥ss; steel wine, to ℥iv; dose, ʒj, in a little water *directly after* meals.

This mixture is much used in the treatment of children who suffer from chronic eczema. A little wine of aloes may be advantageously added in cases of troublesome constipation.

(27) *Sulphate of Magnesia and Colchicum Mixture.*—Sulphate of magnesia, ℥iss; carbonate of magnesia, ʒij; tincture of colchicum, ♏80; peppermint water, ℥viii.

A useful purgative mixture in eczema. A dose should be taken in half a tumbler of water half an hour before breakfast.

Ointments.

The best bases for ointments are the prepared lard, benzoated lard, vaseline, or unguentum petrolei, the two latter being nearly the same. As a rule, the mixture of glycerine with lard in the preparation of an ointment should be avoided, for when glycerine is applied to an excoriated surface it is very irritating, and often gives great pain. The glycerine of starch may sometimes be used with advantage as a basis, as, for example, in the iodide of starch ointment, or in making tar ointments that can be washed off easily. In most ointments vaseline may be used in preference to lard, the chief exceptions being the tar ointments, in which lard is much better than vaseline.

(28) *Iodide of Starch Ointment.*—Powder of starch, ʒj; solution of iodine, ʒj: glycerine of starch, ℥j.

Lard may be used instead of the glycerine of starch if preferred. Or the following recipe may be used:—Starch, ℥j; glycerine, ℥ij; water, ℥vj. Boil together, and when cool add solution of iodine, ℥j.

Iodide of starch ointment is very useful in the treatment of some forms of chronic syphilitic ulcers and sores, also in lupus.

(29) *Peruvian Balsam Ointment.*—Peruvian balsam,

ʒj to ʒij; prepared lard, ℥j. This is an excellent ointment for sore nipples or cracked lips. It is also a good mild ointment for scabies when sulphur cannot be used.

(30) *Compound Lead Ointment.*—Plaster of lead, 3 lbs.; olive oil, ℥xviij; prepared chalk, ℥vj; dilute acetic acid, ℥vj. Dissolve the plaster in the oil over a slow fire, then add first the chalk and afterwards the acid, constantly stirring until they have cooled. This is the compound lead ointment of the old London Pharmacopœia; it is one of the best lead ointments, but sometimes rather too stiff, therefore a little more oil should be used than is given in the above recipe. It is an excellent ointment for the treatment of chronic eczema, but, like all lead ointments of this kind, it often temporarily stains the cuticle or nails a yellowish brown.

(31) *Litharge Ointment.*—Lead plaster, oz. 10; olive oil, Oj; oil of lavender, ʒij. Heat and mix thoroughly the lead plaster and the olive oil, and then add the oil of lavender.

This ointment may be made of any consistency by increasing or diminishing the quantity of oil. It is much used by Hebra in the treatment of eczema.

(32) *Yellow Oxide of Mercury Ointment.*—Yellow oxide of mercury, gr. iv. to gr. viii.; vaseline, ℥j. This ointment is very useful in chronic scaly eczema and dry seborrhœa of the scalp, and in eczema (tinea) tarsi and eczema of the external ear and nostril.

(33) *Chloroform Ointment.*—Chloroform, ♏vj to ♏viij; cucumber cerate, ℥j. This ointment sometimes gives relief in pruritus. A strong chloroform ointment may be made by rubbing up quickly together chloroform with twice as much lard.

(34) *Stavesacre Ointment.*—Powdered stavesacre, oz. ⅛; prepared lard, ℥j. Digest by a gentle heat for an hour and strain. The best ointment for the treatment of pediculi corporis.

(35) *Thymol Ointment.*—Thymol, gr. x to gr. xv.; vaseline, ℥i. An agreeable, moderately stimulating ointment, which may be used in the treatment of mild cases of psoriasis instead of tar.

(36) *Krameria Ointment.*—Extract of krameria well mixed with sufficient glycerine to make it quite soft. A useful astringent ointment for the mucous membrane, especially in the treatment of piles; it is less irritating than gall ointment and more effective.

(37) *Chrysophanic Acid Ointment.*—Chrysophanic acid, gr. xv. to ʒj; lard, ℥j. A stimulating ointment, which is very useful in the treatment of ringworm and psoriasis; chiefly objectionable because it stains and spoils everything with which it is brought in contact.

(38) *Boracic Acid Ointment.*—Boracic acid, ʒj; prepared lard, ℥j.

A moderately stimulating ointment, very useful in the treatment of ulcers. Diluted with an equal quantity of vaseline, it forms an excellent ointment for eczema when a little stimulation is required.

(39) *Bismuth Ointment.*—Nitrate of bismuth, ʒij; hydrochlorate of morphia, gr. ij; simple ointment, ℥j. An ointment used for irritable eczema, and especially for pruritus ani.

(40) *Oleate of Zinc Ointment.*—Oxide of zinc, oz. ½; oleic acid, ℥iv. Mix and set aside for six hours, then apply heat to liquefy and form a perfect solution. To this add from 5 to 10 oz. of vaseline, dissolve, and stir till cold.

(41) *Oleate of Mercury Ointment.*—The oleate of mercury (10 per cent.) is made by rubbing 10 grains of freshly precipitated yellow oxide of mercury with 90 grains of oleic acid until it is dissolved. This forms one of the best ointments for the treatment of ringworm. It should be diluted (to 3 per cent.) for young children. It is also, in my opinion, a most useful application (5 per cent.) for superficial lupus. I have tried it for this affection in a

considerable number of cases, and I beg to recommend it in this respect to the notice of the profession.

(42) *Lead and Mercury Ointment.*—Acetate of lead, gr. 10; zinc ointment, ʒij; calomel ointment, ʒj; nitrate of mercury ointment, gr. 20; vaseline, to ℥j.

This is nearly the same, but not quite as strong as an ointment which is much used at the Skin Hospital, Stamford Street, for the treatment of chronic eczema of the scalp.

(43) *Hypochloride of Sulphur Ointment.*—Hypochloride of sulphur, ʒj; prepared lard, ℥j. This ointment is used in the treatment of acne. It does not keep well.

(44) *Compound Citrine Ointment.*—Carbolic acid pure (Calvert's No. 1), citrine ointme ntand sulphur ointment in equal parts, to be well mixed and made fresh every week.

This ointment is recommended by Dr. Alder Smith as an excellent one for the treatment of ringworm. He says: 'It can be applied without fear, at any rate to children over ten, to the entire scalp every night, and to the patches again the next morning. In children under ten it is advisable to use a double proportion, or even more, of sulphur ointment. It causes no pain, and is very effectual.' Of course this ointment must not be used when there are excoriated surfaces from blistering fluid or other strong applications. I find that it is better diluted.

(45) *Mercury and Belladonna Ointment.*—Extract of belladonna, ℥ij; distilled water, a sufficiency; ointment of mercury, ʒvj. Rub the extract with water to form a soft paste, add the ointment, and mix well.

PILLS.

(46) *Arseniate of Soda Pill.*—Arseniate of soda, gr. $\frac{1}{16}$; sugar of milk, gr. 1; extract of hop, gr. iij.

Used in psoriasis and chronic eczema.

(47) *Protoiodide of Mercury Pill.*—Protoiodide of mercury, gr. $\frac{1}{2}$; quinine pill, gr. iii. A very useful pill in the treatment of syphilis.

(48) *Bicyanide of Mercury Pill.*—Bicyanide of mercury, gr. $\frac{1}{20}$; quinine pill, gr. iii. This pill is useful in the treatment of syphilis.

(49) *Binodide of Mercury Pill.*—Biniodide of mercury, gr. $\frac{1}{16}$; quinine pill, gr. iii. Used chiefly in syphilitic eruptions.

(50) *Sulphate of Iron Pill.*—Dried sulphate of iron, gr. ii; carbonate of potash, gr. ij; tragacanth powder and treacle, a sufficiency. Dose, one to two pills three times a day. An excellent pill for the treatment of chlorosis.

(51) *Carbolic Acid Pill.*—Carbolic acid, gr. ii; liquorice, gr. 1½; compound tragacanth powder and glycerine, a sufficiency.

POWDERS.

(52) *Compound Liquorice Powder.*—Senna leaves prepared in fine powder, 1 part; liquorice root in powder, 2 parts; fennel fruit in powder, 1 part; sublimed sulphur, 1 part; white sugar in powder, 6 parts.

Dose, from one to two teaspoonfuls in a little peppermint water.

This is nearly the same as the compound liquorice powder of the German Pharmacopœia; it contains less senna and is not so apt to gripe, but it is a little less active.

POWDERS FOR EXTERNAL USE.

(53) *Iodoform Powder.*—Iodoform, gr. 30; finely powder cinchona bark, ʒiss.

Used for sprinkling on chronic ulcers and soft syphilitic sores.

(54) *Zinc and Starch Powder.*—Powdered starch, ℥ij; oxide of zinc, ℥ss; calamine, ℥ss.

An absorbent powder used for excoriated surfaces.

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